

# Second FRAMAC Meeting Notes -- Centering on the Concept of Frameworks

## INTRODUCTION

1

These are notes on the FRAMAC's second meeting May 12th, 10:00 to 12:00. They are based mainly on the transcription of the tape recording made at the meeting, with some editing and minimal rephrasing.

1a

A serious attempt was made to not change any meanings, but undoubtedly, some meaning changes will be found that crept in during the process of trying to omit the distracting verbage.

1a1

The session was recorded. The tape was transcribed by PSO, with the start of speakers' comments identified with statement names. That transcription will be entered into the Journal separately.

1a2

Those present were:

1a3

MF Auerbach  
 WL Bass  
 DC Engelbart  
 JD Hopper  
 CH Irby  
 DS Kaye  
 MD Kudlick  
 HG Lehtman  
 JB North  
 JC Norton  
 P Rech  
 JF Vallee  
 DH van Nouhuys  
 KE Victor  
 DC Wallace  
 RW Watson  
 JE White

1a3a  
 1a3b  
 1a3c  
 1a3d  
 1a3e  
 1a3f  
 1a3g  
 1a3h  
 1a3i  
 1a3j  
 1a3k  
 1a3l  
 1a3m  
 1a3n  
 1a3o  
 1a3p

B Cox  
 DR Brown

1a3q  
 1a3r  
 1a3s

Those not present were:

1a4

WH Paxton  
 DI Andrews

1a4a  
 1a4b

The 1962 Conceptual Framework (3906,) document's INTRODUCTION in a structured version by JCN was distributed for reading prior to the meeting: (10J74, ).

1b

Second FRAMAC Meeting Notes -- Centering on the Concept of  
Frameworks

It appears important to DCE to establish within FRAMAC a common idea of what he means by a framework and what its importance is in our developing common understandings about his framework.

1c

He cited an early XDOC reference (9,) not yet online, but in hardcopy to be distributed.

1c1

(x9) Kennedy and Putt, "Administration of Research in a Research Corporation," The RAND Corporation, 20 April 1956.

1c1a

This document discusses frameworks, what they are, the need for them and was used by DCE for guidance in the writing of the 1962 report (3906,).

1c2

Frameworks are especially needed in interdisciplinary programs where particular professional and other specialized frameworks can have the effect of blocking progress within the larger, perhaps ill-defined framework.

1c2a

Most researchers inherit their framework from their profession through their professional training or experience.

1c2a1

Most of the discussion centered on the concept of frameworks and set the stage for a discussion (next meeting?) of the 1962 report.

1c3

EDITED AND SUMMARIZED NOTES FROM THE MEETING TAPE

2

(DCE) Last time we ended up with the idea that we would pick up the 1962 report and begin by just getting into it at this time. One time, back about 1965, I guess, I got it all transcribed into the system so it was online. Possibly that carried right in to the 940, but some place we have lost it, along with a fair amount of other material, so that -- Jim had the first part of it transcribed, and it is a kind of experiment to see if it is of much benefit in doing it. Then he went through and restructured it from its original paragraph structure to see what it looked like and I thought it looked so good that I asked him to stick it in the Journal as a separate number under his name as a thing he'd done, to take another look at it. And hand it out this morning.

2a

I started looking at the report to say, "All right, where shall we begin, and what kind of topics might I like to see

Second FRAMAC Meeting Notes -- Centering on the Concept of  
Frameworks

grow out of it, and incidentally, how do we get dialog going on it?"

2a1

I ran across an idea and I got to thinking about it, I decided to bring up a topic before we go into the report; this has to do with the idea of a framework. What do we mean by it and what's the value and need? I looked through the report expecting to find some quotations and extracts from the report, where I first really had it explicitly laid out to me what a framework was.

2a2

I guess there were many early drafts with those extracts in the introduction, but later, I guess I threw them out. So I am surprised. So, Jeanne and Mil found the report this morning. It is reference 1 that I cited in the framework document of 1962, and it happens to have XDOC No. 9. It really dates back. So it was retrieveable. So at least with that, this morning, I really realized that there is a good bit in here that I would like to communicate and discuss this morning and I really recommend that people get it and look at it. What I have done is type out some of the quite relevant extracts from it, and what I thought at the last minute was that instead of my reading it here, why didn't I journalize them and just distribute them, and that is why I was asking if the Journal is up.

2a2a

I'd like to talk about this report a bit, put it in perspective and communicate some of these extracts.

2a3

I haven't looked at this report since probably about May 1962, maybe even earlier than that.

2a4

(RWW) What report is this?

2b

(DCE) XDOC 9. Its title is "Administration of Research in a Research Corporation". Written by John L. Kennedy and G. H. Putt. It is a RAND Corporation report. And Kennedy is -- was a very high-powered researcher in RAND's staff, and Putt, I guess, is the guy who was helping put it together -- put RAND Corporation together.

2c

This was very early in RAND's existence, and this was something where the two of them got their heads together and discussed the problems of a research corporation as they were struggling with it.

2c1

I haven't read very much by Kennedy in the general print,

Second FRAMAC Meeting Notes -- Centering on the Concept of  
Frameworks

but there was at least one other beautiful little report he published in the later 50's - a new perspective of the United States and the world communities and the divergence between the have and the have-nots and the time constants that were available to us, etc. Just a beautiful thoughtful piece.

2c2

So that gave me a very good impression of him, and this report -- when I read it again, this morning -- I was just astounded at how relevant it is, and I didn't appreciate much of what it said at the time, because I hadn't lived through this last 10 years. I'll use the notes I made.

2c3

(DCE) Here were a researcher and an administrator getting together to talk about the problems. They apparently lived through a number of large, tough programs in which they seemed to encounter very unusual problems in coordinating people to administer research. And they dug into this and the salient thing they came out with was the idea of a framework. And the fact that if you didn't have an adequate framework within which the group of people pursue the goals, you got into trouble. What they talk about is relevant to almost any relatively large program -- a program that has an interdisciplinary flavor. And it puts very clearly -- what it meant to me back in 1962, first.

2d

I had already been spending quite a few years trying to find a place to take the idea and the basic goals I had. Where can I go and get engaged and pursue this goal? And in the mid-50's there were a number of things I had considered, and a long succession of my approaching people in different disciplines. In psychology, where they linked up small groups dynamics -- they've got concept formulation and learning, and I would go into the information science world where they've got information retrieval and content and selection of significance, and I would go into artificial intelligence to try to get computers to do the things we would like to get teams to do better. Go to computer science --

2d1

But in every case, I would soon just find the value to me would sort of dry up. The perspective that that discipline would put on it and the -- just prevailing sort of thing: you walk up and they would listen for a while to the idea, saying that what you could do is take a team of people and look at all the redesignable aspects in its system for it to make you more effective, and they almost all passed it



Second FRAMAC Meeting Notes -- Centering on the Concept of  
Frameworks

off with -- you know, here's their discipline and that's all.

2d2

And they would sort of say, "Well, you merely have to do this --, that's the problem." I got these different peaks. And it got very uncomfortable. None of them, the things they said would provide an outline about how you go about an augmentation systems pursuit over the years. I think I can dig up a letter from my memory. Who is the fellow now at IBM that wrote APL?

2d2a

(RWW) Iverson.

2e

(DCE) Iverson. Sure. So after I was talking with him at at Harvard, he made a transition to IBM. In our last communication -- he said, "I got your writings and reading it is too much sort of like junk. The problem really boils down to a matter of algorithms. I write an algorithm, get a good language for expressing it and that's what the problem is.

2f

So, I read -- came across Kennedy/Putt, and they talk about the need for a framework in which to do it. The process of deriving a framework is something that most researchers don't get involved in, because they inherit a framework from the discipline they grow up in. And there is a comment in their notes here, saying that the process of inculcating a framework in their heads is probably one of the most important activities that goes on in the undergraduate part of their training in a given profession.

2f1

That is what made me stop and spend a lot of time and call this a framework.

2f2

And then, they differentiate very explicitly between the process of developing a framework which they call "Search" and then the processes within that framework doing the research or doing the development. So they said that the "Search" phase is something that researchers never really talk about because it is assumed that they are going to do their work within the framework of their discipline.

2f3

In the development of their theme here, they talk about the unavoidable appearance in an interdisciplinary team of big, significant problems.

2f4

That's where I have arrived at also, about this augmentation stuff. You have to have a team.

2f5

Second FRAMAC Meeting Notes -- Centering on "the Concept of Frameworks

And they say here, quote "Interdisciplinary teams recently cry for the integration of the products of all the research activities from all the different disciplines. Seems simple and straightforward on the surface, but in it is a Pandora's box of unsolved administrative problems about the human motivations, traditions, habits, expectations, etc. -- in a word, culture."

2f6

I finally started using that term culture in the Mid-50's too, just to try to say, "I don't know what it is, but the number and types of changes and differences that seem to be involved here cause a lot of snarl -- can only loosely be identified as a culture, the combinations of what you feel and think and expect, what your habits are."

2f7

He says, "every new organizational form runs up against cultural lags, deepseated traditions and well-entrenched conservatism. The research administrator embarking on a research venture involving an interdisciplinary team should weigh carefully the cultural costs of integration. One of the first observations to be made about the various separate disciplines of science and technology is that each has built up its own framework or culture, represented by preferred ways of looking at the world, preferred methodology and preferred terminology, preferred ways of presenting results, preferred ways of acting."

2f8

He points out that people who seem to be most salient in establishing our science and technology back in the early days, if you would look at the sorts of things they did, etc., you would realize the biggest thing is in establishing a framework, the sort of approach for doing things rather than the explicit techniques.

2f9

They say, "but with a sharp line drawn in modern times ... " -- and they point out that that searching thing is more of what you would call a philosophic activity than a scientific activity. "With the sharp line drawn in modern times between philosophy and science, searching for the better framework in science seems to be confined to the very few philosophers of science and technology. The many do research.

2f9a

Research has come to be as ritualistic as the worship of a primitive tribe, and each established discipline has its own ritual. As long as the administrator operates within the ritual of the various disciplines, he is relatively safe.

2f9a1

Second FRAMAC Meeting Notes -- Centering on the Concept of  
Frameworks

But let him challenge the adequacy of ritualistic behavior and he is in hot water with everyone. The first conviction of the research specialist is that the problem can be factored in such a way that his particular speciality is the only important aspect."

2f9a2

That must have run afoul in those days because ---

2f10

"If the specialist has difficulty in making this assumption, he will try to redefine the problem in such a way that he can stay within the boundaries of his ritual. If all this fails, he will argue that the problem is not appropriate. Research specialists, like all other living organisms, will go to great lengths to maintain a comfortable position. Having invested much time and effort to become specialists in a given methodology, they can be expected to resist efforts to expand the boundaries of the methodology, or to warp the methodology in terms of the new framework."

2f11

I'll go back of that and just say, I really didn't understand the implications when I studied this 10 years ago, and this is a two-way thing now. I can't sit here complacently and tell everybody, "Ah, see, that's the source of the problem. People coming into a group don't understand the framework. They want their own old thing." But that's a two-handed thing. That I am an organism that finds comfort in maintaining my framework, too. So I am not trying to lay it on them here in just this one-way thing.

2f12

Try here to use their kind of reasoning and a little bit of authority from some people who thought about the background here, just to get us to start thinking about the question of the framework, what it means, what importance it has, and start trying to perceive: Why is it a sticky, funny, important thing? What difference does it make? What problems can it produce?

2f13

They sort of point out that -- if you've got researchers on a job that spans several frameworks and got two solutions, basically: Let the guys work on the problems in their framework, and then somebody, the guy who administers the whole program, needs to take the results and integrate them into some overall framework -- so that they (the several frameworks?) are in that relevant to the problem assigned to the whole team.

2f14

Second FRAMAC Meeting Notes -- Centering on the Concept of  
Frameworks

But that raises problems because it is the administrator's own framework and he is unhappy because he has doesn't have time and energy to develop it very well, and the individual guys are unhappy because, you know, it looks like it warps, and diminishes, and confuses the things they developed and the significance of their role in it.

2f14a

They don't share that large a framework. That produces tensions, so they say that with a project of any real size and long range consistency, those tensions are just too much.

2f14a1

No one is satisfied. And it is the frameworks that are most difficult to communicate because one quickly runs into fundamental philosophical and cultural issues. Isolate that and capitalize that.

2f15

Through the years I really have observed that in a University environment, for instance, and the way graduate programs are run, there really is such a lack of discussion and treatment of the ideas of a framework. It is sort of assumed implicitly. And even issues that involve questioning and exploring a little bit, the framework and the range -- within their discipline, where is it going? And what are the frontiers of the discipline now? Which frontiers might have the most social significance -- payoff -- to do? What's going to yield the biggest advance? Where does our discipline want to be in 5 years? What are the kernel things now that are going to be needed in 5 years?

2f16

I used to query, probe, with the young Ph.D. candidates that we interviewed and offered jobs and they didn't accept them and that kind of stuff -- this was years ago. I really did probe in there -- what did they think about what the frontier was? What sort of framework their discipline has, and it just struck them, struggling so pitifully and embarrassed, that I realized that it was an unfair thing to probe them with, because they come from an environment in which there is just no discernable value involvement with that kind of topic or issue.

2f17

So, I put those observations together with what they said here and I said, "All right, putting together interdisciplinary groups and all really presents problems." People came -- and there has been no discussion about it, and they have absorbed the

framework and the only assumption they could have is that that's the world's framework, that if there is any important research or contributions to be done, that they didn't do it.

2f17a

(JCN) What do you mean when you talk about an interdisciplinary group?

2g

(DCE) Well, if you needed to get some people in a space capsule, you would have to have guys -- to compute the psychology of the guy and the physiology and the physiological psychology of how to keep them and the energy would be maintained, there are a whole bunch of technical problems, there is destruction, and there's getting there and out of there. There's many, many types of problems and there is no one discipline that you can learn in a University that trains you to design that whole thing.

2h

(JCN) Are there disciplines just on that level? Or with a writer, editor, and typist, a printer -- a group like that -- a team that is trying to produce some document. Is that an interdisciplinary group? Or is that too low?

2i

(DCE) No. There are lots of teams that all have particular roles, but if they kind of meet at the -- all interface --

2j

If you want to produce a design of a piece of hardware and you start negotiating with a hardware designer and he is acting as your architect and trying to produce something for you that is quite workable, this prevails for many, many years. And that relationship of a professional who is there to try to produce for you the best design to meet your needs is -- if there get to be very many like that, then the complex of what one would advise you and another would advise you and another begin to be the results of their particular viewpoints.

2j1

So if you, yourself, don't have an architectural framework very well established, you really get the impact of all these different specialists who do the parts for you -- and you've no way to decide whether the conflict of that attitude or feeling or value that they will bring up -- you expect tradeoffs and conflicts in any design.

2j1a

(JCN) Because of the mix of disciplines that are going into --

2k

(DCE) Well, you expect them no matter what your design, even



## Second FRAMAC Meeting Notes -- Centering on the Concept of Frameworks

if its your own backyard. That's within your own framework, the value and perspective and all, that you start adjusting toward and making your tradeoff decisions. But if you don't have any overall framework, how are you going to do that? And, if all your advisors in these different ones don't share in your framework, then no one of them can resolve these things for you. If you don't have a framework.

2l

What they are implying is sort of, if it's like that, and your psychologist and your physicist and your mathematician are all advising you in different ways, you are the guy that is administrating the overall thing -- you've got to sort of run your own little framework sort of in your head -- figure out how to weigh those. And, if it is not a particularly visible framework and the psychologist feels that you had to cut some of your tradeoff conflicts in certain ways, and in your framework, you feel like you have just totally ignored what he has been trying to tell you about the importance of such and such --

2l1

(JCN) It would make a difference if he could see your framework.

2m

(DCE) Right. Let's say that -- Of the ways to handle this, the first way is just to the administrator having to do his own framework in his head, runs into trouble. When he talked to them about problems of developing a framework and that equal -- I mean, from research disciplines aren't trained to think about it or find one, so they limped along, and he describes a couple of approaches that they tried with the whole group participating in developing a framework.

2n

(WLB) Who's "he"?

2o

(DCE) Oh, they -- the authors.

2p

(Unknown) Which is the researcher and which is the administrator?

2q

(DCE) Kennedy is the researcher.

2r

(BC) Was that Glad Putt?

2s

(DCE) G.H.

2t

(BC) We deal with Glad Putt rather regularly right now. You might want to meet him. He could come over. If that's same Putt.

2u

Second FRAMAC Meeting Notes -- Centering on "the Concept of Frameworks

TAPE DAMAGED AT THIS POINT missed a small amount.

2v

(DCE) Then they say -- that "are research cultures based on rewards to the individuals, not to the team? The perceptive research specialist knows this fact of life perfectly well. Hence the interdisciplinary team is unstable on these two counts, the sweat, blood and tears of trying to resolve conflicting values and the problem of reward to individual members.

2w

The appropriate expectation for interdisciplinary teams appears to be that they will be unstable in their associations. That this is the expectation for such a team seems appropriate" -- interesting view about that.

2w1

"It is precisely into this facet of research behavior that the research corporation administrative agency should insist on" -- a whole lot. The subsequent research corporation administrative -- what SRI needs to do or what society should see needs to get done so that the approach to the really complex and significant problems has a chance to proceed.

2w1a

"Research can be done by individual specialists, once the framework has been established, although certain large problems will require" -- large research kind of problems -- will require "continued close cooperation during the research and development phases".

2w1b

Then they go on the say that it isn't just research that needs a framework, but then that development does also. People working on a given development thrust have grown in disciplines, too, and have a framework, but if they are going to be doing a development that comes from interdisciplinary research, then they have to have communicated to them the framework that the "search" and research phases of that thing went through.

2w2

So they say that's a significant problem also. One can't just say that the research group has designed this, now we'll develop it. You would just go about undoing a whole bunch of the balanced tradeoffs, etc, that you got through this search and research phase in developing. And of course, we obviously have to make this thing work, so we'll do it this way.

2w2a

There are a few sort of gut experiences 'way back that just made me ready to believe this right away. When I was a

## Second FRAMAC Meeting Notes -- Centering on "the Concept of Frameworks"

young bachelor and out of school and having fun, the first time I had a car and was rebuilding it. I happened to be rooming in a house in Los Altos and the neighbor was a machinist. His 17 year old son was always tuning up and all that. This machinist guy rebuilt cars and made racing cars out of them, and he could just really do it.

2w3

So I learned a lot because it was really great. But there were times when we really couldn't communicate. And there was one time when I was looking at how he was changing a car. He took the linkage from the accelerator pedal to the carburetor and just redid it. And I said, "Why did you redo that?"

2w4

"Oh," he says, "those damn engineers. Anybody knows that if you've got a pivot here like that with a crank on it and you've got a lever coming through it, that it is only in a range through here that it really pushes it, and they've got it designed so it started way over here. I just changed it."

2w5

I remember pouring over automobile manuals way back to 1918 -- that's older than I am -- and marveling that even then they had engineering to think about where to place bolts and things like that to share the strain. And I said, "Did you ever stop to think that if you -- if you want to make a relationship between where your pedal is and how the acceleration capability of your car is, that you don't just do it like that -- to make the most direct coupling to that butterfly valve in there that you made, because when the car performs at various states, you may want to have it start here, so that it could --"

2w6

But he couldn't accept that. He knew a principle and he applied it in his framework and he totally rejected the possibility that there was a bigger framework within which to treat that problem. It isn't a very important issue, but it really stuck in my head. That a person will cut off when he feels like he has got a picture and if a larger framework within which that picture is not enough to deal with the issue, may be told him. But it is just a natural thing in the world to say, "You can't convince me -- I KNOW".

2w7

It's something we all do. And I just tell people, "I hear all the words, but I have to understand and feel it. You know, that's the same kind of thing. It's a natural

process in people's minds that there is more that goes on than just hearing words and having pictures drawn.

2w8

There is some kind of a feel about what's right and what makes it work. And you can't get pushed faster than that feeling develops in you. That's the belief part and perspective in there. I have it and everyone does. When he's talking about here are the kind of dynamics about what goes on in people.

2w8a

No matter how much -- when it frustrates you, you can rail and squirm and stomp about it. But there is one kind of comforting thought. You realize "Gee What if there weren't that kind of resistance to momentum in people? They very readily would adopt new things." It's sort of like saying, what if you didn't have friction in physical devices? A lot of the things that make our society stable enough to live are probably dependent upon that lag that it takes to expand when you have friction -- what can then call a cultural lag.

2w8b

(JFV) Have you read "The Time of the Comet" by H. G. Wells?

2x

(DCE) No.

2y

(JFV) He talks about that problem. He assumes that there is something in -- there is a comet that is going to collide with the earth, and there is a big crisis on earth at the same time and that comet contains a certain gas that changes consciousness of the people. And when the comet collides with the earth and nothing drastic happens, except that this gas, or traces of it are brought into the atmosphere. And the people change their attitudes then.

2z

(JCN) One thing your saying is that there is a heirarchy of frameworks?

2a\*

(DCE) Well, that is pretty apparent in some given area, like say computer systems that we would want us all to share or something like that. You know that there are guys who are architects of what goes in and runs the support of some installation, and there are guys down there that are analysts and systems programmers and configurators and hardware people of different levels and it goes way on down until you get the people who are roaming through physics -- physical phenomena, trying to put together things that will make new devices.

2aa

There is a tremendous heirarchy there, in which there are

## Second FRAMAC Meeting Notes -- Centering on the Concept of Frameworks

people -- you know, we have had to learn in society how such heirarchies work, the relationships between the different levels so that they can accomodate something of very great complexity.

2aa1

(JCN) Or would you also think of it as a network?

2ab

(DCE) Yeah, I would imagine that someday when disciplines -- you know, you could make a hierarchy out of the whole universal knowledge and stuff, probably. But the way that disciplines today are cut and work, is something that evolved like in a jungle, you know. And you don't expect such neat ordering, so much of it would be a network, where you would have overlap between two or three disciplines in some kind of issue. You really wouldn't know -- they each would probably deal with that issue in some significantly useful way, but within a different framework. All you need to do is start out from a -- say management science, decision science point of view, or from an information retrieval point of view or from what an AI guy -- an artificial intelligence point of view, to talk about the way you would handle certain problems and you realize they all overlap.

2ac

(RWW) I can remember back in the days when I was studying automatic control there were the electrical engineers -- and we knew how to look at the problem. And there were the mechanical engineers -- and they didn't know anything. And there were the mathematicians who were so far out and spaced out that -- you know, they couldn't even be dealt with.

2ad

(DCE) And there were the chemical engineers with their processes

2ae

(RWW) We didn't even consider them.

2af

(JFV) You know in the history of technology and research, it is well known that when a new fact presents itself -- a new observation -- that is in conflict with the framework, the reason that people don't accept it immediately in their science, is that they don't look at it as scientists. They look at it emotionally, they go outside their framework. There are many facts in astronomy today, for example, that are not looked at, simply because they don't fit into any framework.

2ag

(RWW) If they don't fit into a framework you can't even see them.

2ah



## Second FRAMAC Meeting Notes -- Centering on "the Concept of Frameworks"

(JFV) A good example of that is the story of Vulcan. Around the turn of the century there was a planet in the solar system, called Vulcan. It had an orbit and people were taught about that planet.

2ai

(JFV) It was between the Sun and Mercury. And there were observations of it. People still see something like that from time to time. Around 1900, people collected observations so they could explain the motion of Mercury with that.

2aii

(JFV) And then of course Einstein came and explained the perturbations of Mercury with Relativity and then they didn't need the planet, so the planet went away. If you go to the astronomical archives, you'll see that the observations are still there, but they don't fit into the present framework. But if you talk to an astronomer about it he'll just say, well, you know, you're just doing metaphysics. So it's not just framework, it's a matter of psychological and emotional attitudes that people have invested in framework.

2ai2

(DCE) Well, I think that that's really what they're trying to say and what I'm trying to getting across is that it's not any plot or any problem in the intellectualizing that comes from the feeling and the attitudes and beliefs and values and what's right and what isn't.

2aj

(PR) We can observe that in daily life. Let's consider what is going on at a meeting. If anyone brings up a new idea at a meeting it's immediately rejected. What comes out of the meeting, as I have said many times is the least common denominator of what's in the mind of everyone.

2ak

(DCE) That's a very depressing observation.

2al

(PR) You don't agree with it?

2am

(DCE) I don't agree with the inevitability of that.

2an

(PR) Oh, no, after thoughts, if you come back and if there are iterations, you come back to the same topic gradually. But in decision making meetings, where a decision is to be made it's much too late to introduce a new idea.

2ao

(PR) Because there aren't enough frameworks shared by all the people in the meeting.

2ap

Second FRAMAC Meeting Notes -- Centering on the Concept of  
Frameworks

(JFV) I'm not sure it's just a matter of framework. Planck has said that a new idea never wins but its opponents die.

2aq

(JFV) He said that after making a big contribution in physics. His observation about his colleagues was that never do the enemies of a new idea get convinced. They never change their framework. They eventually die. The young people grow up in the framework of the new idea.

2aq1

(HGL) After Planck discovered the quantum of energy, he spent the rest of his life trying to disprove it. After everyone else had accepted it.

2ar

(DCE) There's a kind of dynamic in there too, that framework evolution is a slow process and we have to realize it and if people want to work together and realize that that involves the enlarging and shifting and integrating of framework, they have to realize that this is the process that will take time, but also if that's going to become more of our life, there's much to learn about facilitating that process.

2as

Then realizing that it isn't just a matter of giving the guy the words and the intellectual picture. It's soaking it up, his feelings and awareness and working on beliefs and attitudes and I'm not really trying to approach the PODAC point of view left-handedly, but that's the genesis within me for saying something like PODAC needs to exist within a team that's going to really be trying to cross country like that.

2as1

Something it has to learn about facilitating that process of integrating our beliefs and attitudes and understanding more about what the other guys are, what is it that limits him.

2as2

It's just like understanding the cast or brace he's wearing. How does it limit him? Or understanding what car he drives and that car can't accelerate fast or something.

2as2a

It's not that some guys are bad guys and some are good guys, it's just everybody has these makeups that evolve biologically and you see them over lots and lots of years and that intellectualization and conceptualization that's better that we've got -- that's the thinnest part of evolution that we've got is just evolving and that's sitting on a substrate of so much else that's going on and we have to become perceptive about what happens and

Second FRAMAC Meeting Notes -- Centering on the Concept of  
Frameworks

goes on in there to be able to push it a little bit more.

2as2b

I don't want to get into that too much.

2as2c

(KEV) Is it possible for everyone to get this meeting of matching of frameworks?

2at

(DCE) I don't know and I rather doubt it, but the biggest issue is for people to become aware of that are frameworks and that what's happening when you look into them and that if you aren't going to learn, you know, if we can't all get the same framework, how can we still work together and just agree that there's a belief that you hold that runs counter to what we're doing and if we can't share it, okay, it's not because one guy is a bad guy or something, it's what we have to understand and try to work with it as much as we can and not have it be an invisible thing; and that when we run into the troubles that it causes, we attribute them to being bad guys versus good guys or stupid guys versus enlightened guys.

2au

So to recognize it see it and begin trying to say, how do I learn what that person's framework is, is there some process of dialog. If we start sampling and testing with questions and dialog instead of getting dialog where its all or nothing, let's say, well look, what are the boundaries of your framework. Ask them, and do it because you see that everyone has got structure of beliefs and feelings and it would be very important to know where your teammate's are.

2aul

(KEV) What happens if you find out that people have conflicting frameworks?

2av

(DCE) and if they are irresolvable? -- then it just may not be that they should try to work that closely together.

2aw

(HGL) But if they are minor differences, you can get together and create a synergy.

2ax

(DCE) There's a lot to learn about the adaptability and grow-ability, it's sort of an organic process that there's many people who can get working together and sharing something and who can really learn a lot and they are sort of anxious to work towards having the same, that's a strong belief I have. There are fears, there are hostilities, vulnerabilities, many kinds of things that you can get, but all of these are

Second FRAMAC Meeting Notes -- Centering on the Concept of  
Frameworks

dynamics that can be worked with, the people can develop more awareness about what's happened.

2ay

Let's try to think about what kind of button we've got pushed. It's for real, I look at programmers, I think, Oh, there have to be lots of subprocesses that's going on below what's conscious to do what we do and when psychologists speak about the unconscious, boy it took me years before I, you know, that wasn't my framework and I just didn't hear the rest of what was said.

2ay1

"That's no way -- that's an abstraction way to get around looking at what's real", but it was really a good experience for me like 13 years ago or something when the Perceptron came out and that approach to self organizing artificial intelligence ran across the heuristic programming commune and all snarles and everything else and I began to realize that they were really talking about different levels and a highly structured thing and the heuristic programming guys were talking about very high level programming things and the other ones were talking about what's going on way down at the biochemical neuron levels, why should they be arguing then?

2ay2

But then just beginning to wonder in the human mind, how many layers and levels of organization are there to get up to the level of the kinds of things we're conscious of inside our heads and you know you don't have to be much of a computer oriented guy to realize that that must be more complex than any computer system we ever conceived of in that maybe we can be conscious down to that level, and wow, think of all the -- maybe this is all the biological self organizing and from here on up its some kind of programming.

2ay2a

(CHI) 300 subroutine calls to replace character.

2az

(DCE) So what would it be like to replace belief? It must run around all over in here and it just takes a little readjusting. I would really like people to reflect and have some full sessions on that just to say an unconscious process, a button being triggered that defenses are raised when you try to say, of course, why? You know, it makes you realize that if you go look at the books on behavior and the clinical psychologists, behavioral people are talking about, they have been observing that and the language sounds funny, there's a lot to think about and say.

2b\*

Second FRAMAC Meeting Notes -- Centering on the Concept of  
Frameworks

I'm not proposing that PODAC become such great analysts, but it's really been much observed in the last decade, especially the last five years that the experience of meeting and trying to deal consciously -- trying to deal with, having faith in the people you're working with to work out and dealing with the bumping of these frameworks of these attitudes and beliefs is something that begins to develop a skill in yourself, like, you try long enough and you learn how to stay afloat in water, there are many skills like that, and you become aware of more things that are happening.

2b\*1

(some ideas missing here?)

2b\*2

(DCE) You don't just wipe them out because your framework says that's such and such. Stick with it awhile and work with it and assume the other guy is a real human and if he wants to try he'd really much rather you were friends than you weren't, really much rather that you both understood each other than you didn't, and etc.

2ba

(DCE) Well, So much for that. The issue of framework, if one is going to pick some issue off the world of concepts and problems etc, and say he wants to make a long-term direct approach towards that and that this runs sort of diagonally across the grain of much else that's happening in the world, which means there, let me define that. It's a concept I use a lot. If you develop a new service for a product, and get it into the market, that's what I call a nice thing in the stream. There's just all kinds of established techniques, systems, conventions, legal things, expectations and people, appreciations for one, etc. like that that support the pursuit of this. You are going to set up a company. Now, you've got two or three choices, you can take one pre-packaged, you get the ---?

2bb

And even thus, though, you realize what an overloading kind of challenge it usually is to start here and get something going to make profit. You have a goal, with all the way paved, with all these things set up to work with, it's still very hard.

2bb1

So you look at something that goes across (the grain?) and you just realize that you're going to hit lots of problems. There's no such thing as just a corporation being formed, or you can call it one but it's soon going to show that the structure and conventions and expectations of the old form are inadequate.

2bb1a



Second FRAMAC Meeting Notes -- Centering on the Concept of  
Frameworks

How to get people enlisted, what do you call them, where do they fit? How do they parcel up their job and go do it? How do you finance and fund it? What are the legal problems you run into? These things are all sort of codified and worked out over lots of evolution and framework.

2bb1a1

A real mess there, so a long-term kind of thing that's running kind of criss-cross is much much more complicated. But that's what has to happen in conscious evolution and larger social things, lots of little evolutions that happen in larger corporate things, that evolution will take an awfully long time to get at learning how to deal with evolution crisis, or the resources and coordination crisis, anything. So we have to learn how to deal with bigger changes.

2bb2

They just bring in complexities that we don't appreciate. So not only does it mean that people that embark on that be aware of the time and kinds of problems in that, much of their own judgments about how long it should take from here to here because they see it, you have to be sort of come to terms with the fact that snarls make it go slower.

2bb3

So, okay, on one hand we can say a lot of this is to help recognize the sources of some of the snarles we have but on the other hand it means if its the objective and the way of life that a team of people is going to go that way, they better start learning about what the natural kinds of things are likely to hit.

2bb4

Learn better how to cope with them and that's sort of like saying that FRAMAC and PODAC are for trying to inaugurate some conscious activities here that start getting us in better shape to deal with that. It's just a pragmatic need that there's been floundering and falling off this and getting mired and terrible amounts of energy going into emotional things and so on all the years of this thing and there are lots of possible causes.

2bb4a

I said one of them really could be just me. I spent a lot of energies getting psyched and stuff. "What's the matter, Doc?" "Well, it isn't just you, there are problems but they aren't much worse than, if you handle, etc. keep working on them". There's a lot to learn.

2bb4a1

## Second FRAMAC Meeting Notes -- Centering on the Concept of Frameworks

So if the task of cutting across the grain, I can't stand it the way it's been. We have to start looking at what our framework is so we kind of know. Know what we're aiming for and how we perceive a lot of these things and we have to get the mechanism to help us deal with the frustrations and conflicts of shifting and growing of framework and adjusting. Those are things we have to learn as a team that's going to try to go cross country.

2bb4a2

(JCN) What did you say? We're going across the grains on a lots of other things or not? Why are we different?

2bc

(DCE) Ah, I'd really like to just carry on to say we need to do it and that's a premise I'm making because ours has this character. Or to go over and look, what is it that we're aiming towards providing the world anyway, its how do teams, we're trying to learn how to help teams of people tackle the really complex, so that's, I mean, they're really complex, they're challenging things. They are those that twist framework across the boundaries. That's the character of just a really complex corporation.

2bd

So someplace in our course through here we have to start dropping off things that start saying "Here's how to help." And everyone of those is going to run in that same sort of problem, so we have these two needs. One is to learn how to function in there and begin developing instincts and skills in this and the other is that some time to start dropping off: "here's how".

2bd1

But it's really the first part of that that we have to learn that's the key thing right now. I'm not ready to drop off and tell the world here's how to do it. We have to find a way for us to get here and then we can start on sort of an intellectual problem of when and how and in what form to drop off and recommend to other people what they do.

2bd2

Okay, JCN's question: Rephrase. I'm just stating, if I picture of what we do is cutting across the grain, Jim wants to know why do I say we're cutting across the grain. I just, I'll just to have to start working on the answer. If in the framework we look up here and just draw a box and we call that system, an augmentation system, and inside it is assumed we are going to put a bunch of people so that this whole thing is very high in effectiveness, just the fact that the subject matter of this seems to cut across

## Second FRAMAC Meeting Notes -- Centering on "the Concept of Frameworks"

many disciplines, is enough to say it has a big aspect like that.

2bd3

Not only that, but get a perception of what this is likely to be when the product gets out, we all know now it's not just that we shift product x in the plan to some guy and say, now you can do your process that much better. It means that the integration of that involves a lot of change in the way those people work, enough change so you have to say it's a cultural change.

2bd3a

So that both the things we have to work with and the process of getting people to accept and work with it are both the kinds of things that involve lots of change. So your very approach to marketing the thing is going to be difficult, the very approach to getting people to be cautious enough about adopting it so that they're ready for gliding through the cultural changes within the group.

2bd3b

(RWW) Let's see, Doug, there is sort of a counter to that. You can say that there are lots and lots of people (who you've got as a straight line mode) who have done that already, for example the first people that started dropping digital computers into people you know, were doing some fairly significant cultural changes in institutions and it turned out that the initial ways that they were used were simple and straight enough that there weren't any major problems.

2be

(RWW) If you look at what I see is happening inside IBM and, they're beginning to transform themselves fairly radically because of these problems, but they did it within one of those, they didn't start out by saying, "Gee, we're really going across the grain" and too much of that.

2bel

(RWW) They sort of did it by starting out with what they knew how to do and then they started out across country. They had a different vector and you can look at many of the technological innovations that people created and put out into the world that were done in a similar kind of way.

2bela

(DCE) People are liable to say, by far the largest impact has been, the Xerox machine and bigger than a computer.

2bf

(RWW) Yeah, Xerox didn't sit there tearing their hair out, you know, about, maybe they should have, but they didn't. Well, we know how to build this thing that will copy this piece of

Second FRAMAC Meeting Notes -- Centering on "the Concept of Frameworks"

paper onto that ece of paper, and we know that there must be some needs. We could simplify our life too, instead of trying to figure out all the levels and complexities and tearing our hair out.

2bg

(MDK) Yeah, I'd like to try to put that into a different context, When we talk about frameworks it seems too abstract , unless you're talking about a framework with a particular type of discipline. A framework is a set of attitudes. We know what your goals are, right?

2bh

(MDK) To go back to the example of PODAC, or PODS, I think one of the difficulties in POD is that we're talking in a very abstract sense, within the PODS.

2bh1

(MDK) We're trying to understand each other, but with respect to what? My framework is different, depending upon what I'm thinking of then, depending upon what I'm doing. If I'm talking about social interaction or interaction with respect to people or business transactions, professional or people, actual pursuits, you have a different framework and what I see on the board and what I think you're talking about is that you would like to establish the framework, I think this is what I hear, anyway, that you'd like to establish the framework and then once we all understand each other, we'll talk about goals.

2bh1a

(MDK) And doesn't it really have to go the other way around?

2bh1b

(PR) Yeah, I agree. If I go to a mountain, what I care is whether or not my colleague has a good stamina not whether he is champion in ping pong.

2bi

(DCE) I'm never talking about separating them, I don't mean to, so those are assumptions you begin talking with and I would go back and examine those, let's say PODS. Why do you feel that if you talk about learning each other's framework you say, well, what other assumption would be logical to make about what makes things work in here.

2bj

(MDK) But that doesn't mean anything to me.

2bk

(DCE) That's not so. What goes on in meetings, what are your beliefs about what we're working on, what are the conflicts, how do we learn to have dialog, how do we learn in a meeting to come to a consensus on some issue that is common around

Second FRAMAC Meeting Notes -- Centering on the Concept of  
Frameworks

here. Its a picture framework, though, so I start with a framework of seeing this to be done. How do I know how much I can communicate with a memo and two lectures?

2bl

(JCN) When you say that, you're just talking about your framework. There are many frameworks. So you're just saying that you're starting with yours.

2bm

(DCE) And I don't intend to just talk in general here today, I'm saying a lot to get across some feeling for why I think a framework series is important.

2bn

(?) What's that circle out at the end of that arrow, Doug? A target? A set of goals?

2bo

(MDK) Okay, my comment is that we talk about that first, or what it is, clarify it and we would all be able to talk about the framework and if we wanted to work and could work and what our attitudes are in getting there.

2bp

(DCE) I think we'll go back and forth and around, because just the way you cast the picture of that goal depends on what your framework is about that.

2bq

(RWW) I don't see how you can even talk about goals with one of those chicken and egg things. You've got to have a framework or you can't even see it, the goal doesn't make sense.

2br

(MDK) A statement that I heard, and I came in late, was that in any relatively large goal oriented interdisciplinary program, framework is most important. And it seemed to me that you have to have a goal-oriented program before you can talk about framework.

2bs

(DCE) Well, what we're just saying is yes, we need goals and then I'm claiming you need a framework with which to make them more clear. If you can look at that 1962 report you can say, does that provide a picture of goals, and if it doesn't, then we need to start talking there to find out why doesn't to you, that represent goals. Okay, that's a big cut at it, but if we find more specific goals, we really need to look at the framework which involves strategies, involves values, assumptions about the way things happen in society, until we talk about ---

2bt

(MDK) I think the '62 paper is a good place to start and I think we should update that paper and see where does it fit in



Second FRAMAC Meeting Notes -- Centering on the Concept of  
Frameworks

present day thinking. I have a whole lot of frameworks, I've got religious frameworks, I've got social frameworks, I've got male-female frameworks, I've got all kinds of frameworks that really aren't relevant and until we talk about what our goals.

2bu

(DCW) You don't get real conflicts with people until they're both, you know, jostling each other or trying to get into the same door at the same time.

2bv

(DCE) Yeah, but I don't understand that these are of course, so why do you assume that we aren't going to work on trying to talk about these?

2bw

(MDK) Maybe if I answered yes we'd get somewhere, because I do kind of assume that.

2bx

(DCE) Well, okay, then I'll have to say that I don't share that assumption.

2by

(JCN) Maybe we're on the framework level just long enough. maybe it is time to cool it and move in toward the things ---

2bz

(?) Things would become more clear on the differences of people's frameworks).

2c\*

(PR) I'm even not sure we've talked about a framework up to now. What we've talked about is what is the need for a framework.

2ca

(PR) What is the framework?

2cal

(DCE) Well that's why ---

2cb

(RWW) My impression of what Doug was trying to do was first trying to convince us there was such a thing and we all sort of believed that. Now it's time to move on.

2cc

(DCE) The need and the problems, that's right. So if, is that, a recasting, you say well, now you're going to move on?

2cd

(JCN) I have a question about the other things we had last time, we skipped them this time.

2ce

(DCE) Yeah, I got trapped into reading that and didn't.

2cf

(RWW) It would be nice to have them, I really thought we had set up a good thing there.

2cg

Second FRAMAC Meeting Notes -- Centering on "the Concept of  
Frameworks

(DCE) There really is something there, about that there is a kind of framework when I say I can't imagine you saying you don't have goals if we're talking about all this so I have a lot to learn about what your framework is if you can make a comment like, "We've got to have goals before we can get a lot of framework." and I've asked people to read this (the 1962 report) so it just drops me when you make a statement like that.

2ch

But it's just like saying, that if I drew an arrow like that and put a picture up there like that and you say yeah, but you can't talk about framework until you have a goal so that's a very sweeping statement and in my framework on how people conduct dialog --- it just sort of leaves me gasping.

2chl

(JCN) It's not clear to me that's what he said. I didn't get that message. Could you (MDK) restate it?

2ci

(MDK) I'm confused by that last thing.

2cj

(JCN) Are you really saying that you don't see goals in here?

2ck

(MDK) No, I didn't say that at all.

2cl

(DCE) Well I'm just saying the way he said it just left me like--

2cm

(MDK) There are a lot of goals in there, there are goals that we can't obtain in ten years, he's talking about analysis, semantic analysis of people's thought process and how they want to interact with information from the computer. but they're really very very long-range goals.

2cn

(DCE) But when you say there aren't any goals I clarify about scale or,

2co

(RWW) He didn't say that.

2cp

(DCE) So that leaves me saying --

2cq

(RWW) Doug, we've said to you that we didn't hear that from him.

2cr

(JCN) Yeah, you'll have to stop that.

2cs

(DCE) Yeah, I will. When you start talking about the whole area in goals, strategy, approach, and what I can see as

Second FRAMAC Meeting Notes -- Centering on the Concept of  
Frameworks

principles of, in the technical development of a thing we call an NLS system or something on the computer picture of an augmentation, there are many many facets and I need to evolve into that someday that just isn't opening.

2ct

And so, like today, it sort of comes in first. We come up and say, how do we go about discussing that, because what people see and understand and believe is something. I think the report is a good starting place. I wouldn't say that we need to stay with this until it's done if we want to take digressions and look at specific examples. A big part of what I need to find out is where everybody else is as to the report for awhile.

2ct1

(PR) Doug, I am very uncomfortable now. How is this series of framework meetings going to go? Are we going to come up with a plan saying in ten years we want to be here, in five years we want to be here, in two years we want to be here? Is that the end goal of this series of meetings? I'm not sure I understand what we are trying to do. That's what I expected, but then maybe I don't understand well.

2cu

(DCE) Well, it's a lot of why I pick up this kind of thing and spend a lot of time talking about it. To try to, if we can, think of what constitutes a framework and how does one communicate it, it's hard and there are lots of aspects to it, but the net result of having a goalstructure is ---

2cv

(PR) Is that what we are shooting for? A plan?

2cw

(DCE) But the bigger one, yeah,

2cx

(RWW) About the the question I aksed you a couple days ago about what to expect to end up in terms of: there are going to be some of us who are going to agree with you some percentage and others, and what your feelings were about those, because I felt very satisfied with the answer you gave.

2cy

(PR) Are you asking the same question Doug answered privately before?

2cz

(RWW) No, I -- a slightly different question than, two different questions but they're important enough about the question about what the FRAMAC is trying to do to answer both of them I think.

2d\*

(DCE) For a while, the goal is for me to find out where other people are in their beliefs and understandings and then once I

Second FRAMAC Meeting Notes -- Centering on the Concept of  
Frameworks

start getting callibrated to do what I can so that I begin to feel there's an understanding of what my framework is. that's a phase I sort of thing.

2da

When we get to that point, I'm going to start the business of seeing how the integration might go and what sort of compatibilities an incompatibilities I might integrate into a more uniform one. The product of that is goals and strategies and it's certainly not -- I can't imagine in the end a committee this big.

2da1

When it finally gets down to small groups, sometimes one that's got to somehow pick a tradeoff cut or something, the biggest thing I need is to know where people are and that whatever framework we do have, to know how much it is understood.

2dala

(PR) Doug, we have all read your report -- I can not conceive of anyone in this room who would be here if they could not agree with this framework. But maybe they need a job, but, really, if we are here it's because we agree. Therefore, we don't have to establish that in my opinion.

2db

(PR) The question of whether we are competent or not depends on -- I come back to my expression on: where do we go? I mean, if you tell me you want to go to the moon, I would say, well, I don't want to go there. That's a big question, however, this is too vague, too general to discern anything. We've got to know specifically and then we can see what we have to do to agree and to function and to go on the same line and whether or not we need POD.

2db1

(JCN) Paul, what you say, sounds true to me as an end result, but you're jumping over something with the assumption that people who have read this report, and I'm not sure they all have, really understand it and understand it in the same framework context that Doug understands it.

2dc

(PR) Well, it's when we talk about specific goals that we can really find out whether we really understand it.

2dd

(JDH) That's the difference. That coming to a list of such goals is not an indication of success, or is it the overriding specific goal? I don't think that's the case.

2de

(HGL) We can't even discuss goals unless we have a common language, and it's been clear, I don't think we do yet. We haven't explored the language.

2df

Second FRAMAC Meeting Notes -- Centering on "the Concept of Frameworks"

(MDK) Charles Irby in our POD meeting said, (and I don't think he'll mind if I paraphrase it here) that when he works with people on a project that's when he gets to know their attitudes and beliefs and that's when he understands them because they're all working in let's say a framework.

2dg

A clear cut set of goals, their framework comes out, personality comes out, their personal aspirations, working patterns and behaviours come out and he understands them very well, and he either gets along with them or he doesn't but he can talk with them because they have a common mission and I think that is what Paul and I talked about.

2dgl

(RWW) Yeah, I would like to disagree with you though, Paul, because of the fact that everybody read it, it's sort of like our framework says we agree, I've sat in enough English classes in my undergraduate days where we all read the same novel and then we've discussed what we read and our interpretations of what it said, and why it said it, to know that people have very different views of, they all read the same print with the same words and I don't see any -- I think we want to go where you want to go but what Doug wants us to do is take a little longer route and wander through some of this stuff -- just how we read it and what we did when we read it to see if we really came to the same conclusions.

2dh

(PR) That's not what Doug said. He said he first wants to make sure that --

2di

(RWW) No, he didn't say that, and that's why I wish you could answer the question that I asked you, Doug.

2dj

(DCE) I can't remember the answer.

2dk

(RWW) Let me answer for you, okay?

2dl

(RWW) Yeah, the question I asked at the last FRAMAC was: "At the end of some period of time do you expect us all to agree with you?" Namely, he's going to lay out his framework and then there are going to be those people who say they "understand" and those people who don't.

2dl1

(RWW) Those people who understand are those people who agree and that was his goal, to get us all in that state. That was my question. okay.

2dl2

(RWW) And then Doug's answer to me was no, that's not what I expect. What I want to do is lay out this framework and



Second FRAMAC Meeting Notes -- Centering on the Concept of  
Frameworks

when we get done I will expect some people, my framework he's saying, and when I get done I will expect I would like you to understand my framework. You don't have to agree with it, but at least understand what my sort of picture is.

2dl3

(RWW) Then I would like to understand a little bit, (I being him) what your frameworks are so we sort of understand the overlaps and protrusions are and then when he gets to that point, (phase I).

2dl4

(RWW) Okay, I don't know how long that's going to take, he's paying me to sit here, and Bart and Dave are going to sit here, and then at that point he says he wants to go do what you're talking about, namely the detail goals of where we want to go, break up into small committees, maybe one man to work out specific problems and go.

2dl5

(RWW) That answer satisfys me and as long as SRI is paying me to sit here, I'll sit here.

2dl6

(PR) If that's your answer, it does satisfy me.

2dm

(DCE) I would be willing to start at either end, but I know that before long starting at either end is going to bounce us to visits at the other end and back again. Starting with general and basic background and working up to goals and popping back, but I'll stumble if I start at either end.

2dn

(?) Can't we just accept that and assume that that's going to happen, that you say so and it's likely that we'll go back and forth, but it seems to me that something we ought to do is because of the fact that we're going to go back and forth, that shouldn't prevent us from grabbing on to something and I am feeling that there's a little bit of -- we're going to go back and forth, therefore what we do is go back and not start. I think we need to glom onto something and start to travel, whatever it is.

2do

(DCE) okay, so it's like me jumping into cold water.

2dp

(DCW) The thing that just happened that I think is cool is that a lot of people have been sitting here and I don't really agree with Dick Watson that you are paying me to sit here because if I don't want to sit here I won't and I don't care whether you pay me or not.

2dq

The thing that happened just now is that there are some

Second FRAMAC Meeting Notes -- Centering on the Concept of  
Frameworks

reasonable expectations as to what we're going to get out of here and there are things that we want to get to, so that makes it worth while -- going through a lot of things that you might not otherwise or what not, probably because the end result will get us somewhere that is desirable.

2dq1

And I think that that's what Paul's initial question is: Where in the hell are we going and doing in here, and I think, if that's the way I understood it, and I think that's been put to rest, so I think we can move on.

2dq2

At least in my mind.

2dq3

(DCE) I'll just start stumbling a bit with what I think are some of the kernels from that report that I think are the strongest that were launched, including the initial strategic cut that was placed then. In a matter of an hour or two I would like to go up and make a quick pass at a picture of the bootstrap community thing.

2dr

If I drew this line like this up to here, someplace in my lifetime there's a sort of -- that's my life-time pursuit. Anyway, some place up here there's the bootstrap community and there are some things beyond there that we can touch on at some time.

2dr1

(JCN) It would help my expectations -- when you say you're going to go for an hour or two, do you mean the first half hour will be the next half hour and the last part will be next Friday? and that's what we're working towards?

2ds

(DCE) Oh, I'm sorry, append meeting. Break meeting, too. What time is it?

2dt

(RWW) 11:35.

2du

(DCE) Yeah, before we get into that, because once I get wound up in there and involved, I'll have trouble untangling and say Oh, next week, and also I'm avoiding jumping, but I'll be gone next week. It had occurred to me that what might be really interesting to do and even if in some way -- we ask some people to plan to give five or six or maybe even ten essays, or if some people want to come and shoot pool, if you can agree in some way to conduct the meeting so it wouldn't get too many people frustrated that we're wasting time, I would be pleased to pay the bill in order to do that.

2dv

(KEV) How are we going to attain this common understanding

Second FRAMAC Meeting Notes -- Centering on the Concept of  
Frameworks

between you and us if you're not here? It seems to be self-defeating.

2dw

(DCW) If possible we can get our heads together and --

2dx

(KEV) I mean, that's what happened with PODAC, it started out with you being there and it was going to attempt to do some things and you withdrew somewhat from PODAC and it's taking awhile to get back again, you've got into that loop and I would like not to see the same thing happen with this.

2dy

(DCE) Right, but in that memo of FRAMAC launching, I mean PODAC, is another thing and I am not saying the involvement I have is that which was laid down as being what I should -- FRAMAC -- I just can't see it as being just a this way, back and forth. There has to be a lot of cross dialog. It's important for people to begin to feel for each other to know when to speak up or when to ask and probably the only when that dialog gets rolling that I begin to see where people are at in their understanding.

2dz

(RWW) Doug, I would feel more comfortable if you wouldn't say it like that. you keep saying I'll feel more comfortable when I know where you're at, you know, it's like it's all Doug's. I'll feel more comfortable when I knew where everybody knew where everybody else is at.

2e\*

(DCE) I'm just talking about the phase I, for example, I just don't want to go on open-ended. That's the perspective that comes from -- My feeling of good, comes from that.

2ea

(JCN) I'd like to give just one idea at this point if you're talking about what to do next week --

2eb

(DCE) What if somebody gave you the gavel next week?

2ec

(BC) I'll take it. I think it would be a good idea to have it in your absence and I think its a very useful concern to raise, but it seems to me that maybe the group without Doug might make some progress toward it's own understanding of where Doug is so that when he returns it would be closer together instead of apart. I have a feeling it could be by such a session and that wouldn't be denying what Doug is saying but trying to have it a somewhat different understanding of a way to communicate with him more closely when he comes back.

2ed

(JCN) To finish the idea, I'd sort of like to report about

## Second FRAMAC Meeting Notes -- Centering on the Concept of Frameworks

something. This little thing that we passed out is just the introduction to a large document, it doesn't really have the the subsets and concepts but it has a lot of the flavor of what went on at that time in the thinking. I've read this document now three times, and every time it looks like a different document and I try to relate it to what I see.

2ee

(JCN) This time I got a completely different flavor from it because I had to go through seven little pages of the same thing and I've played the game of restructuring it.

2eel

(JCN) To restructure it meant I had to read it in a different way and reading it in a different way, I really got a lot of more powerful meanings out of it than I ever did before.

2eela

(JCN) One of the objectives is to understand what it is Doug's been talking about, here's one place that he wrote down some of the ideas, you might consider some kind of game techniques of really looking at what is there in different ways, than just a quick read through.

2ee2

(JCN) I just want to report to you that I got a very powerful new look into it just through the process of having had to go through it with a fine tooth comb. Maybe you don't all want to do that but you just might want to consider looking for different ways of comprehending the thing.

2ee2a

(DCE) Dave Evan's thesis started out and, it was 500 pages, it has a lot in it that he tries to paraphrase or rephrase too, so I don't stand responsible for saying I didn't sign off that, but it's another way to get pictures.

2ef

(MDK) It just occurred to me because of the shortness of the meeting and the fact that you're not going to be here for a week, you might want to start this when you come back, that you're going to get into a long story.

2eg

(??) I'll second that.

2eh

(DCE) That's like letting you off the hook.

2ei

(RWW) There may be some miscellaneous things we want or we'll just break up.

2ej

(DCE) Yeah, are there topics you'd like to come and say that I could answer quickly for you?

2ek

Second FRAMAC Meeting Notes -- Centering on the Concept of  
Frameworks

(PR) When you explain what's your framework do you expect to sit in the crowd and allow some of us to explain, to counter your argument or present another framework if there is one? 2el

(DCE) Not until the end of phase I. That's worth maybe explaining if I can. That has to do with if I got an argument with that mechanic about that linkage, it is just very frustrating, because I thought he would know some of these things and I didn't know if he did. So on what basis were we discussing what he was telling me what his framework was --. 2em

(PR) I said once you are through. 2en

(DCE) Yeah, right. then there's some process I think it would be worth. 2eo

(RWW) Yeah, that's a concern of mine too, you're, once we've got your framework which is important for us to get, there may be other frameworks that people want to also take a little time to run people through sessions or whatever it takes as well. 2ep

(DCE) I assume that we'll do a series of that and I would only qualify about how much time, I really would like everyone, I would really love it if everyone said they would like to give a 20 minute or an hour presentation of where I'm at. I think it would be great. 2eq

(JCN) Have you ever given any time estimate at all of what the Phase I might entail, one or two hours? six or twenty? 2er

(DCE) I'm so disoriented about where people are and in the past I've been trapped so often by thinking they needed that I was talking to people and thought they knew. But, what is it going to take so I feel that now we understand.? 2es

(DCW) I have a question about the linkage analogy. In your analysis of where he was, was the conclusion that that he was right giving his framework? 2et

(DCE) Well, he built racing cars that seemed to work very well. 2eu

(DCW) Because when you presented the analogy, I got the feeling that you were both right and that he didn't give a damn about all of the things that you were concerned about and didn't in fact need them and so he was right in that the only



Second FRAMAC Meeting Notes -- Centering on the Concept of  
Frameworks

failing in that is that he didn't appreciate your picture. If you appreciated his then I see the need of your analogy.

2ev

(DCE) We couldn't even talk about whether or not he had thrown away something that could be useful. See, when you've done that, it just, he made a strong value statement about the stupid engineers. So, I was hung up there.

2ew

(PR) Along the same analogy, there is something which really annoyed me. In your picture, you have a big framework, big subset -- a big set which was yours and a little subset which was the engineer's which implied that you know much more than he does. I would hate you to think like that about us.

2ex

(RWW) Yeah, that bothered me too, Doug, I got the feeling that his framework might have been just as big or maybe bigger than yours, it's just that in the subset they overlap. I think it's a healthier picture.

2ey

(DCE) The inside the framework encompasses the whole universe.

2ez

(DCE) I'm drawing something that includes a hierarchy of things that end and I ---

2f\*

(RWW) It's very important though, because sometimes sources of irritation that have been in me relative to you have been the assumption on your part that you've got the big picture and I'm sitting there talking to you about that little piece. From where I sit sometimes I think that I've got the big picture and you only see the little piece.

2fa

(DCE) Yeah, I consciously, when I'm reading these things, try them on both ways and they work both ways. My comfort is in staying with the way I think about it.

2fb

(PR) Do you have to keep drawing subsets when you're drawing on the blackboard?

2fc

(DCW) Well, because the implication is if you can get the larger framework that really exists. Okay, it's a desirable place to be. and I see that as an analogy. And the trouble is that you always say to me -- what he really wants to say is -- that's where we all want to get. That's a personal goal of his own, but the picture is right, it's just the connotation.

2fd

(DCE) But then the subjective thing is the experience that it didn't -- when I draw a circle like that, I mean that's the guy's whole framework. It just sort of says the domain within

## Second FRAMAC Meeting Notes -- Centering on the Concept of Frameworks

that I think is our augmentation research center's framework, that's the domain that is being put on and enough that can apply to the rest

2fe

(DCW) But we're all being phony-baloney modest, we all think that the other guy - (TAPE ENDS HERE).

2ff

(DCE) We'll harp on something that covers that part and I can't do a dialog about it like that and that's what I want to circumvent. I am not making any claim that that represents their whole picture at all. If there is an implicit framework within which a lot of the decisions I have to make go like that, I just can't stand more of that harranging about things here.

2fg

(RWW) No, I buy all of that,

2fh

(MDK) Yeah, but I think that's a key phrase, Doug, we need to be able to draw more klein bottle type pictures but the picture I have is that that guy -- little projection that you circle is nothing more than a projection, he's got a lot more out and all around.

2fi

(DCW) The intersection picture is much more satisfying.

2fj

(MDK) The intersection picture is more satisfying and the reason I get back into the conversation, is what I heard you say is you don't want to bother with that little detail. But that's what I heard you say and the point is that if that man is making a little detail discussion about a little detail, he also is bringing in a very large background to bear on that particular point and it's not just that that's all he sees. He sees a hell of a lot more.

2fk

(DCE) Sure. We have to have a common view so we can dialog over enough of the issues that relate to that particular item so that if there is disbelief, not a shared belief about it, we can resolve it. Okay. There is a big network of considerations in the framework I have to work with and that has to be more common and shared before I can stand getting into harrangues about it. Little points are important, but --

2fl

(RWW) Doug, what I am asking from you right now, is for you just to acknowledge that we also have frameworks that might be as big as yours. Whether you believe it or not I don't know but at least you're willing to believe that that's possible and that that little point is an intersection and not just, and its important for you to understand in our framework as it

Second FRAMAC Meeting Notes -- Centering on the Concept of  
Frameworks

is for us to understand yours and as long as you say yes to that and I believe you, then I'm happy. I don't know if that's happy.

2fm

(DCE) Yes.

2fn

(JFV) Yes, but it's not necessarily enough, because after the framework has been defined, suppose that someone has a different point of view. How do you know? Do you have a test that tells you whether he has a different point of view because he draws on a larger framework outside, as in the intersection, or whether he hasn't understood your framework? Picture? Which? Is there a way of telling?

2fo

(DCE) I don't know.

2fp

(JFV) Otherwise, we can never resolve this.

2fq

(DCE) Well, I'm sure that there will be sets of issues for any two peoples' relatedness in which they hang up and can't believe or decide they don't know how or it isn't work trying to untangle them that much. Sure, you couldn't have five engineers working on designing an automobile without that same thing but at least they begin to get a lot of feeling about what the auto has to look like and why the style man worries about this and why the engine man worries about this, and so that they know kind of what the issues are and things are based on.

2fr

(JFV) But what I'm saying is when we're on phase I, if there is some discussion that arises as to change of framework, how do we know that we're making progress, how do we know that we're getting to a point where we have to go back and rediscuss it, the issue on the first framework?

2fs

(DCE) I don't know, if we ever -- We'll have a Handbook someday and there will be a section in it that has sort of a framework and we may have sub-frameworks or appendices and all, but, so this is one that we're operating on and there needs to be a chief editor who finally says, "This goes together like this" and "What's the process?", and I don't see anybody being chief editor but me in the next year or so.

2ft

(RWW) But there's a problem with that Doug, if you go into the world's religious and spiritual literature, you'll find little books like Lao Tse's little thing, you know, that's 80 pages long, okay, and a particular mystique and take one of those little afferisms and send them into weeks and weeks of

## Second FRAMAC Meeting Notes -- Centering on the Concept of Frameworks

writing. There's a whole literature of millions of pages of guys who have interpreted that book and the interpretation, all on that framework, you see, and here's this framework, and for you to say, I'll write it and therefore it will be clear.

2fu

(DCE) No, I didn't say I will write it, I say what's coherent that some chief editor just says, the passage there isn't consistent and that kind of things, how do you resolve it? I don't know, but you need that coherence in what you do stipulate as being the guy in framework and how its resolved.

2fv

(JFV) You're saying someone, an individual will have to resolve the conflict?

2fw

(DCE) Yeah, its got to be an architected thing with coherence and like that and there will be a lot of dialog, and it may sound very silly, but I get a picture of a long term thing going to happen and I'm not going to live or be active in very much of it so it's worth much more to me to get something going, I feel as a pattern for growth rather than --

2fx

(JCN) It may well not just be the case of people, the group as a whole accepting or rejecting the framework that Doug is trying to have us understand but its probably going to be more a picture of basic acceptance of that by almost all people who want to work here toward those goals.

2fy

(JCN) But questions will come up about specific strategies and timing and subgoals and any of those, it seems to me, will get resolved just by having more and more understanding between different people and that subset where somehow there are just enough exterior frameworks that say, well, there just isn't going to be resolution of those questions, I think those are the ones we're talking about where there has to be some arbitrary resolution of them.

2fy1

(JCN) I think there's going to be a relatively small number of those and probably on a lower level than a higher level. That's different from the implication that -- now that's the whole thing, either accept it or we reject it.

2fy2

(DCE) How about or to leave it. For instance, to go into that kind of issue, there is a deterrent to a bunch of things, ideas and possibilities in my head that part of my framework that, are real to me, even though they're not nailed down policies. Talk about the processes that can go on in a large



## Second FRAMAC Meeting Notes -- Centering on the Concept of Frameworks

institution towards resolving a lot of issues like that and integrating to the most effective level what can be contributed by all the people in a team. No one is likely to have the profile that is superior across openly and all that we've got is profiles that are very bumpy, across all the kinds of skills and capabilities that different people have.

2fz

(DCE) The team needs to learn how to develop some process of deciding that this guy's bump of capability really rises right there and at this time and at this context on this kind of issue, he should be the one that we just depend on. There has to be things like that working out so the big issue and I don't see at all that anybody can cover the field. These other things I keep repeating too. Draw a scale of things and assume that things are going to happen downstream. It's terribly hard for me to guess to be able to put years on some of those plans, although I would place large bets, based on intuitive judgement that they will happen, perhaps in that order. I couldn't gamble much at all if it was 2 years or 20.

2g#

(JCN) A comment about the notes from last week's meeting, Dick and I combined our notes and we have the document essentially ready, waiting for the transcription of the history part of it and we're hoping that that will get transcribed next week. It seems like the objective ought to be that sometime before the next meeting we should have the notes of the previous one out so you can see.

2ga

(DCE) There's a little paper that goes by the name of the Dinosaur Paper that is in the Journal, that's probably the only other thing we've written besides this that has much of a framework label and some other time I'd like to go back to various of our proposals and reports and list sections in there that are similar exercises.

2gb



Catalog Meeting, 9 May 1972

PRESENT: RWW BAH JBN WLB MEJ BER JFV

1

Dick asked if anything had happened with Walter's catalog program for proofing.

2

Walter said that Jeanne wanted two additional listings and he wrote them and debugged them to the extent that he ran into an output processor limitation which didn't exist before so he'll have to ask Bruce about that. He also started yesterday on an organization index and got the first level of formatting implemented and pretty well worked out. It will probably take about another hour to finish that.

3

Beau has been working on the Announcement Bulletin which is really a Number Listing of the new catalog entries. Hardcopy will go in a blue binder titled, Received at ARC, in the cave and the online version will be distributed to all ARC through the Journal.

4

Dick felt that ARC needs a Locator like NIC has. Beau suggested having a directory called ARC to put that file in.

4a

It was decided that we will take Barbara's new citation files and run them through Walter's programs every week.

5

We then discussed the back arrow problem. The NIC uses a back arrow to indicate which reports, RFC's, etc., are part of each station collection. Originally, it was intended that every Journal item would be part of the station collections, but this soon become impossible. However, the program that automatically catalogs Journal items still puts in the back arrow. Cindy or Barbara have been deleting them by hand. Walter would like to have us indicate the entries which should not have back arrows. Then we will go to the source file, delete them, and rerun the programs on them. Everyone then remembered that the back arrow problem should only occur with Journal entries, and Walter will take care of this by changing the program.

6

Walter felt we needed to make a decision on how arbitrary size files at every process need to be handled. He felt it would take two man weeks of work to do that and wondered whether he should just wait for the Basic File System to be completed or work on this himself, even though it would mean some duplication of effort. Dick felt he shouldn't wait for the Basic File System, so he won't.

7

June 1 was set at the cut off date for the next NIC catalog.

8

Before we can make the next NIC catalog we have to produce the

Catalog Meeting, 9 May 1972

NIC Announcement Bulletin which is a Number Listing of the new NIC items since the last catalog. Then Walter and Beau can get together to teach Beau the automatic programs. Dick requested that a parameter be set so you can get any subcollection you want set up automatically. Walter said the only problem is that you need to set up headers. That's the only hang up, so you would need only one level of program. Then Walter remember that RFC's are handled as special cases throughout the catalog. Dick said that this should be changed.

9

Submitted by: Barbara Row

10

## Notice of Abstract for Rome Report

A draft of the abstract for the final report is in (documentation,abstract,). I prepared it when the system was down, and even though sections of the report that are finished were largely unavailable to abstract, I thought it worth while to get the ball rolling. Please check it for errors, omissions, or disproportionate treatment.

1

PERC Notes May 10-15

PERC NOTES MAY 10, 15

Present May 10 WLB, CHI, DCE, JCN, MDK, RWW

Present May 15 WLB, CHI, DCE, JCN, PR, MDK, RWW

MAY 10 MEETING

Jim briefly introduced the new charge number scheme. A separate session will be held sometime for a tutorial from Jim on SRI's accounting system.

The need for contact with and information about the mini-console project was expressed. DCE briefly reviewed it, but a seminar was suggested and will be set up by DCE.

DCE mentioned he has begun meetings with Bart Cox to discuss questions of franchising NLS and Bootstrap Community organization within SRI. It was suggested by WLB that the EMC sit in on these meetings. DCE thought it a waste of time. The issue was not pressed, but some doubt remained in PERC as to the wisdom of not including more people especially as FRAMAC was set up to deal with some of those issues.

Attendance at the SJCC was discussed, MDK, DCW and HGL were suggested as people who represented projects, thrusts with something to gain by going. DCW and HGL actually decided to go..

The fact that daily operational problems more suitable for EMC handling were clogging PERC's time was discussed.

It was agreed the first hour of future PERC meetings would be used to discuss LINAC evolution.

Next meeting May 15.

MAY 15 MEETING

DCE reviewed the concepts of contractor, buyer, coordinator, baseline and configuration which he had gotten from a document designing a management structure for NASA's, APOLLO, programming effort. PR asked if anyone knew if they really did it that way instead of just writing a report. None knew.

Three possible organization structures were then presented by RWW, MDK and PR.

RWW presented a structure which placed prime driving control in

PERC Notes May 10-15

projects and said his scheme was designed to follow current LINAC planning organization and cut down the number of direct responsibilities of DCE with thrusts and projects and leave DCE free to deal with LINAC, PODAC, FRAMAC, and SRI etc.

15

MDK presented a structure which placed driving control in functional areas, research, development, applications, operations.

16

PR presented a structure which was a cross between the above two having as a base functional areas and semi-autonomous projects. In PR's proposal everyone would have a home in one of the functional areas and still be free to work on projects or in other functional areas. CHI, RWW and WLB indicated interest in PR's proposal.

17

All three proposals seemed to recognize the matrix nature of projects, thrusts, on one axis and functions on another, as DCE has been envisioning things. The unresolved questions were where emphasis should be placed, who would be responsible for what, and main resource allocation handled, and working out detailed workable operating mechanisms. Further discussions will be held at the next PERC meeting.

18

JCN then reported on a phone conversation with ARPA indicating that ARPA did not have the FY '73 increases we asked for in their current funding and that Larry Roberts will know in a week or so whether he is going to ask for additional funds for our requests.

19



Reply to Postel about His Funny Printout

Jon, in looking at the printout you sent it appears that you had your paper in wrong or that your print head is not in position as we can not duplicate the problem. We have placed on the list of things to do of creating a version of the output processor for model 37's. If you still have problems let me know.

1

RWW 15-MAY-72 17:09 10465

Reply to Postel about His Funny Printout

(J10465) 15-MAY-72 17:09; Title: Author(s): Richard W. Watson/RWW;  
Distribution: Jonathan B. Postel, Walt Bass/JBP WLB; Sub-Collections:  
SRI-ARC; Clerk: RWW;

an interesting pod meeting

The purpose of this memo is to share with others an interesting pod meeting we (CEDAR) had yesterday (5/10/72).

1

Each of us took the below list of values and ordered them according to how important they were as values for us as individuals.

1a

After everyone had ordered them for herself, we then discussed each others orderings and definitions, etc.

1b

At the end of the meeting we then drew up a composite ordering.

1c

AMBITIOUS

1c1

BROADMINDED

1c2

CAPABLE

1c3

CHEERFUL

1c4

CLEAN

1c5

COURAGEOUS

1c6

FORGIVING

1c7

HELPFUL

1c8

HONEST

1c9

IMAGINATIVE

1c10

INDEPENDENT

1c11

INTELLECTUAL

1c12

LOGICAL

1c13

LOVING

1c14

OBEDIENT

1c15

POLITE

1c16

RESPONSIBLE

1c17

SELF CONTROLLED

1c18

system status board, a request for comments

## INTRODUCTION

1

This document grew out of talks between JCN and myself regarding the establishment of a system status board. We would appreciate any comments and suggestions that others may have regarding this subject.

1a

## OBJECTIVES

2

We would like to see established a SYSTEM STATUS BOARD.

2a

This board would consist of a set of lights, each of which would indicate the current status of different aspects of the system, e.g., whether or not the system is up, whether or not the line printer is up, whether or not the journal is up, whether or not the net is up, etc.

2a1

The lights would probably be organized in a hierarchal manner.

2a2

Thus if the system is down, nothing else would be up. If the journal is down, the lights for journal submission, on-line delivery, etc., would be off,

2a2a

The goal is to have as many of the lights as possible maintained automatically by the system, with manual overrides where needed.

2a3

The board could conceivably have a message area where an operator could place messages about future status of the system.

2a4

This area would probably initially be just a blackboard, but could grow into a display area. a la bill board type light bulb messages that could be done somewhat automatically.

2a4a

With this type of a board around a person could tell at a glance what the current status of the system is.

2b

We could place boards of this nature in the machine room, in the display area, in the pso room, in the conference room, and possibly (maybe subsets of the board) in individual offices.

2c

It is anticipated that there be a parallel audio status board.

2d

Thus to get the status of the system, one simply dials up the system status number and gets a "weather report" of the system.

2d1

system status board, a request for comments

It would be nice if the off position of the speed selector on the dial up lines would hook you into the weather report.

2d1a

Thus when you dialed up, you would get the current system status until you selected your speed.

2d1a1

#### IMPLEMENTATION

3

To implement such a board is not too difficult once it is designed.

3a

It requires the building of the board itself, the building of several simple switching circuits, the addition of several conos to the system, and the requisite programming to maintain status.

3b

#### CURRENT EXPERIMENTATION

4

We are currently going ahead with a stripped down version of this board that will only indicate whether or not the system is up and running.

4a

We are doing this to try and get a feel for the usefulness of such a board and to gain insight into some of the problems.

4a1



a personal response to fir

This memo is a personal reply to the SIGCORE (10450) paper from FIR Pod.

1

The last statement (6E3) asked for responses from others. However, I am a little confused as to whom I am responding to, as FIR Pod now considers itself archived.

1a

Does this mean that the responses are not going to be discussed by fir pod and that they really did not want any different opinions?

1a1

I.E., Was this a rhetorical request?

1a1a

Would it not have been better to submit this paper as a position paper from fir pod, and to request that a dialogue along these lines be opened up within and with the other pods before taking an action.

1b

In fact, isn't fir pod, in a sense, doing what they objected to from Doug, i.e., unilateral action?

1b1

Also in fact, as a member of PODCOM, it appeared to me that PODCOM was starting(?) to address these questions and possibly(?) heading in a similar direction.

1b2

I personally question one of the underlying hypotheses of the SIGCORE paper, i.e., that FIR Pod has outlived its usefulness, and that all the members of FIR Pod are active and participating members.

2

This objection might be considered hitting below the belt, however, it is based on the following two observations:

2a

I (and the rest of CEDAR pod) attended a fir pod meeting and it definitely did not include participation by all of fir pod.

2a1

Conceivably this was due to the large size of the meeting (about 15 people) although I don't think so.

2a1a

This last statement is based upon my personal knowledge of the members of fir and their modes of interaction.

2a1a1

From conversations with members of fir regarding the notes from their pod meetings. After reading these notes, some of these people were forced to ask themselves if they had attended the same meeting.

2a2

a personal response to fir

This says to me that fir has not yet learned how to put out a representative document

2a2a

At this point I would like to give my overall feelings for what I think fir is trying to do in its new direction.

3

(I would rather not go into my objections to some of the specific statements (e.g., loss of individuality) in this memo, but will in the future if it is requested.)

3a

It is my personal understanding that what we are trying to do with our personal and organizational development thrust is as follows:

3b

To try and find and or develop better processes of working and interacting in teams.

3b1

In our case a team means both all of ARC as well as the individual teams within ARC. In the near future, team may also mean a large part of the ARPA community.

3b1a

This includes obtaining a shared awareness and understanding among the members of the team as to where the team is headed.

3b1b

To apply the above processes to actually help teams to attain their goals.

3b2

To try to find and or develop processes to help individuals to attain their individual goals (both professional and personal).

3b3

To apply the above processes to actually help individuals to attain their own goals.

3b4

It is my feeling that to approach these goals of PODAC, we could have taken one of at least two approaches:

3c

We could have started a number of special interest teams. (see the Sheldon Davis article on BUILDING MORE EFFECTIVE TEAMS)

3c1

These teams would have been organized around narrow goals (not meant derogatorially, but narrow with respect to ARC as a whole).

3c1a

These teams would work on "getting themselves together".

3c1b

After these teams have "gotten together" they would then

a personal response to fir

start interacting with other "together" teams and gradually this "togetherness" would spread to all of ARC.

3c1c

We could have started a number of inter-disciplinary teams.

3c2

These teams would then deal with developing team processes and "getting themselves together".

3c2a

After these teams have developed some processes and "gotten themselves together" they would interact with the other teams.

3c2b

After these teams are all together, then the processes could be applied to professional teams that would be organized (a la above type teams).

3c2c

(I do not mean to imply that one approach is/was any better than the other.)

3c3

Neither of these approaches can attain the ultimate goals overnight and both are long, ongoing, and perhaps painful, processes.

3c4

I view the SIGCORE paper as going along the lines of the first approach, whereas I see PODAC as it currently exists taken the latter approach.

3d

It seems wrong to me to drastically change approaches at this point in time unless it can be demonstrated that the approach we are using doesn't work.

3d1

FIR may say that they are past stage one of our current approach and are ready for stage three.

3d1a

I have already questioned their passing stage one above and then ask fir what happened to stage two, i.e., how about letting the rest of us catch up with you.

3d1a1

I personally don't feel that our current approach is not working, however, it may well be floundering now and then.

3d1b

CEDAR pod, I think (see also HGLs comments 10453), is finally starting to approach stage one. We are not there yet and probably won't be for a while, however we are getting there.

3d1b1

a personal response to fir

(J10468) 16-MAY-72 11:19; Title: Author(s): Kenneth E. Victor/KEV;  
Distribution: James E. White, Augmentation Research Handbook, Jacques F.  
Vallee, Diane S. Kaye, Paul Rech, Michael D. Kudlick, Donald R. Cone,  
Don Limuti, William R. Ferguson, Priscilla Lister, Linda L. Lane,  
Marilyn F. Auerbach, Walt Bass, Mary S. Church, William S. Duvall,  
Douglas C. Engelbart, Beauregard A. Hardeman, Martin E. Hardy, J. D.  
Hopper, Charles H. Irby, Mil E. Jernigan, Harvey G. Lehtman, Jeanne B.  
North, James C. Norton, Cindy Page, William H. Paxton, Jeffrey C.  
Peters, Jake Ratliff, Barbara E. Row, Ed K. Van De Riet, Dirk H. van  
Nouhuys, Kenneth E. Victor, Donald C. Wallace, Richard W. Watson, Don I.  
Andrews/SRI-ARC; Sub-Collections: PODAC SRI-ARC; Clerk: KEV;  
Origin: <VICTOR>RESPONSE-TO-FIR.NLS;2, 16-MAY-72 11:14 KEV ;

Minutes of meeting with Dr.Allan Kessler, MIT/ADMINS project.

On Tuesday May 16th ARC was visited by Dr.Allan R.Kessler, Research Staff, the ADMINS Project. He was given a short demonstration of NLS followed by a two-hour meeting attended by Jeanne North, Dirk VanNouhuys, Jim White, Aime Michel (visiting from France) and J.Vallee.

1

This is a summary of the discussion that took place.

2

Since finishing up his degree requirements at MIT this winter Allan has been programming for the ADMINS Project. He knows Stuart McIntosh, initiator of ADMINS, since 1965, and has made considerable use of the system in his own research, which centers on social science information. In particular, he has used ADMINS for an analysis of a survey of Turkish peasants involving 8,000 individuals and questionnaires with 250 entries.

3

The ADMINS software has evolved through a series of stages identified as MARK I, II, etc. MARK III, first introduced in 1968, had 100 users in four years. Current system is called MARK V, and development is supported by NSF.

4

They have bought a MULTI-DATA computer (now known as an SEL 7200 since Systems Engineering came into existence) which is a computer mostly used for process control in industry. They use virtual memory (128 K) and will interface to DATEL consoles. Mass storage is Century disk plus fixed head disk storage. In their proposal they had initially considered the PDP-15.

5

Their software has evolved away from CTSS, which they used in the early days, to a more flexible file management system which looks a lot like our proposed set system. (They say that "programmers' concepts of file management are nonsense" and want to move away from the concept of records as individually-addressed black boxes) In their experience, "the trick is to manage everything with the same operators and a single file structure." By everything they mean 1)the data 2)the data description and 3)the system info.

6

Apparently MARK III used to invert everything in the file. Now they are more careful with inverted structures. They try to keep together those items of information that are logically related.

7

They make use of two levels of text-editors; the standard one (similar to our proposed "Novice mode" for NLS) can be learned in less than an hour by clerical personnel and is mostly used for text entry. Next level has access to structure within ADMINS. The command language uses free formats, no delimiters (beyond spacing) and a variable set of arguments. They have been careful to implement clearly-defined interface, so that every program



Minutes of meeting with Dr.Allan Kessler, MIT/ADMINS project.

module is a potential command. They find this especially useful in debugging special programs, such as statistical routines that operate on their files.

8

The system is such that one can become a real expert in much less than one month. They train people to use it by giving them eight standard problem sets, in a self-teaching sort of way.

9

A major problem they currently have is data-base administration.

10

DCE joined us for lunch and other common interests were discussed, such as possible use of ADMINS and NLS in connection with video-tape data. Allan is doing sociological research on "non-verbal records of communication", meaning video tapes of group interaction, analysis of patterns of behavior among infants, finding out how speech learning is affected by relationship with parents, etc.

11

Allan will send us documentation on later stages of their project as it becomes available. We have their earlier publications on file.

12

13

A Diary of Problems and Progress in Making the February 1972 NIC  
Catalog and Directory

7 March 1972 -- BARBARA

1

Yesterday I noticed and Jeanne noticed, too, earlier that the organization were listed in the Author Index as authors.

1a

Jeanne will ask Walter to change the program and Dirk to rerun Author Index because she feels there are too many deletions to be made by hand.

1a1

The printer is still not working.

1b

Dirk, Jeanne, and Walter have decided that Walter will write an alalyser/formatter program that will through the organization names out of the formatted author file.

1c

The machine was down last night and has been up today too intermettently to complete the partition and resorting of the Title Index.

1c1

By dint of good timing between crashes I processed and printed a copy of the Author Index which Jeanne is proofing.

1c2

The system is not going to be available tonight.

1c3

To summarize where we stand, sorting and formatting is complete pending problems that may appear in proofing.

1c4

The Author catalog has been printed.

1c5

The TitleWord Index is in the process of resorting.

1c6

All other indices are awaiting processing into text files.

1c7

8 March 1972 -- BEAU

2

Yesterday I stayed after work for about an hour creating a new formatted number index to replace the one that somehow got lost on Monday.

2a

Early this morning I came in and created the text files of the number listing and the RFC index.

2a1

I didn't have time to do the Number Index before output processor time has expired.

2a2

The printer is still down.

2a3

9 March 1972 -- DIRK

3

Today the printer is finally fixed.

3a

Today Beau printed proofing copies of the Number Listing,  
Number Index, and RFC Index.

3a1

They looked good to me.

3a2

Yesterday when the printer was still making occasional strange  
substitutions of characters, I printed a copy of the Author  
Index.

3b

I gave the copy to Jeanne who as far as I know still has  
it.

3b1

I foresee a bottleneck in proofing.

3b2

I have been struggling this week to complete the partition  
and reassembly of the Title Word Index.

3b3

Let me tell you my problems.

3b4

For example, yesterday I spent from 8 till 9 teaching  
display NLS to Jacques Vallee.

3b5

From 9 till 11 I attended a meeting on the changes Chuck  
has proposed in the NLS command language.

3b6

From 11 till noon I taught Paul Rech about the content  
analyser.

3b7

From 1 to 3 I was intermittently logged in (the system was  
down part of the time), ready my journal items, made  
another attempt to get the 1970 report into the Journal and  
worked a little on partitioning j.

3b8

From 3 to 5 I was in a POD meeting.

3b9

Partitioning and reassembling j involves moving groups or  
plexes of about 300 statements from one file to another 32  
times and an update with each move.

3b10

The system has had its problems in these moves.

3b11

For instance, since the last new NLS output file following  
a move group has invariably led to a bad file (update works  
okay).

3b12

A Diary of Problems and Progress in Making the February 1972 NIC Catalog and Directory

With the system shakey because of drum problems this morning, one of these moves took 10 minutes and 45 seconds clock time.

3b13

At other times they go at a few seconds.

3b14

As it stands now I have completed the partition and reassembled and sorted the A through C file.

3b15

With luck (underlined) I can finish reassembly today and make text files tonight.

3b16

11 January 1972

4

Yesterday I discussed with Dick Watson whether all the special fast sort programs used in making the catalogue were available.

4a

One was not.

4a1

That is we did not have a program to sort the formatted titleword index forward by titleword and backward by number without running the risk of overloading the buffer when the program was confronted with many identical words (e.g., "NWG").

4a2

I talked to Dave Hopper about this program.

4a3

He wrote such a program yesterday, and I tested it.

4a4

It is presently in (hopper, keyprograms,).

4a5

The following has nothing to do with the NIC catalogue directly, but it's relevant.

4b

Last night I went to process the identfile.

4b1

All the programs had run smoothly on the small sample.

4b2

On four tries the run was always interrupted with the message, "user terminated process", and I was returned to the collector/sorter command level.

4b3

The output file was always bad.

4b4

Considerable assorted evidence leads us to believe my terminal (a new T-1) was generating spontaneous ↑0's which caused my problem.

4b5

A Diary of Problems and Progress in Making the February 1972 NIC  
Catalog and Directory

Chuck is going to disarm control 0 for the present.

4b6

I put the Identfile in this morning again, and it was slowly proceeding when I began this diary.

4b7

Beau has made a good flowchart of the procedures for catalogue making outlined at present in (vannouhuys,recipe,).

4c

At this moment he is taking a small sample file through the procedures.

4c1

12 January 1972

5

Today a new record for load average was established -- 15.35.

5a

To continue the IDENTFILE story, last night I ran the IDENTFILE through (nic,idprog,1).

5a1

It bombed out once due to spurious control 0's. I set it in the output processor but the system crashed before it was done.

5a2

This morning when I got up I put it in the output processor and detached it after breakfast when I came to work and reattached it first thing.

5a3

Nevertheless it took until 10:30 (about 18 minutes cpu time) to process.

5a4

This work was largely wasted.

5a5

I had apparently screwed up in running Idprog with the header-send maneuver: to make a completeormatted Identfile it is necessary to compile and institute Idprog and have as the first statement in the Identfile "!START".

5a6

Idprog will then send headers properly once and only once.

5a7

Subsequent uses of the institute program or use of the virgin institute program on a file lacking "!START" will reformat the entries but fail to send headers.

5a8

blank

5a9

Doing the output processor I had also left on the statement names.

5b

After unsuccessful attempts to transfer the headers by hand



A Diary of Problems and Progress in Making the February 1972 NIC  
Catalog and Directory

Barbara proofed the raw IDENTFILE on the basis of the reformatted file.

5b1

Today Beau ran Getnic successfully on a sample file and ran formatter successfully on the file Getnic had assembled for him.

5c

Everyone has agreed that we should run the complete suite of catalog programs only on the new citations and merge the resulting formatted files with the existing NIC catalogues as a final step by means of Dave's new program (link).

5c1

Start of work in the catalogue appears to me to be waiting for Jeanne's go ahead with respect to proofing source files and her write up of procedures.

5d

13 January 1972

6

Proofing the IDENTFILE was not finished yesterday.

6a

This morning Dick came up with a new plan for merging the old and new citations. He suggested running Getnic only on the new generation, taking the new combined listings to the point of number list, merging them at that point with OCT2CAT, proofing for duplication, etc, then separating them by assimilating with the content analysis that searched for statement signatures since October.

6a1

A problem arises in his plan with duplicate entries when the older entry is deemed correct on proofing and no changes are necessary in the old entry in which case the old statement signature would remain.

6a2

However, in such case we could change a character to itself or the like and thus change the statement signature.

6a3

This latter cycle strikes me as a little complicated but would save machine time and file size problems.

6a4

We would then run the collected new citations through the rest of the catalogue making procedure and combine them with the catalogues now on line by means of Dave's new fast double reverse sort.

6a5

Barbara has just pointed out that if the old entry is correct the new entry will be thrown out and the old entry will be in the right places in the present online catalogues.

6a6

A Diary of Problems and Progress in Making the February 1972 NIC  
Catalog and Directory

New problems have arisen in the IDENTFILE. There is a group called NIC which consists of all the affiliates of the ARPA Network. Jeanne wanted NIC to be included as a member of every other group so the Network Information Center would receive copies of any documents sent to these groups.

6b

Now if somebody sends a document to a particular group it goes to all the affiliates on the Network.

6b1

Barbara needs to change this in the IDENTFILE.

6b2

Second, it has proved necessary to create a new group of people who are ex-employees of cites.

6b3

Cindy is proofing the corrections Barbara made yesterday, and these two additions will be made before we run (nic, idprog,) again.

6b4

Even if they finished today, the system is unavailable tonight and probably for most of the weekend.

6b5

On the catalogue front, Beau has run the sample or titleword index and it has proved necessary to go to the November dumps to get proper print directives for titleword.

6b6

17 January 1972

7

On Friday correct the Identfile was not finished.

7a

In running the Idprog programs on a sample Beau found that Getrfc wouldn't run.

7b

It gave the message, exceed capacity, on three trials.

7b1

It isn't clear whether there is something in that sample that screws up Getrfc, whether the program is bad, or it is bad luck.

7b2

Barbara suggests the problem may be that there are no RFC's in the sample.

7b3

Barbara reports she got seven new Idents to enter Monday morning.

7c

When she has put them in, we are going to cut off new idents.

7c1

18 January 1972

8

A Diary of Problems and Progress in Making the February 1972 NIC  
Catalog and Directory

Barbara finished preparing the Identfile yesterday. 8a

Following my conversation with Walter I believe that the  
trick necessary to get Idprog to send headings was to  
reinstitute it (link). 8a1

So last night I compiled Idprog, ran it on a sample,  
reinstituted it and ran it from about 8 till 10 minutes to  
10 on the Identfile. 8a2

I got a file with no printing heads after 18 cpu minutes. 8a3

I discovered my mistake but the system immediately went  
down for the 10 o'clock dump. 8a4

I got up at 5:30 and ran the file again. 8a5

The load average was zero. 8a6

To avoid the whole issue, I assimilated instead of  
proceeding through the collector/sorter. 8a7

The assimilate command had been changed since I used it  
last, but I figured it out. 8a8

After 6 cpu minutes I had a file with printheads but the  
keys were not deleted and the files were not sorted in  
order. 8a9

I spent the first couple of hours this morning figuring out  
exactly what had gone wrong. 8a10

I discovered I can successfully copy the printheads to the  
sorted and neatened file. 8a11

The sorted and neatened file, however, asserts that the entry  
for NIC has an incorrect entry for MIT. 8b

Barbara says there is nothing wrong with the membership  
list for NIC and thinks the program may be giving an  
erroneous error message. 8b1

I am waiting to discuss this matter with Walter. 8b2

I have been waiting for him all morning. 8b3

The only action on the catalogue proper is this: 8c

A Diary of Problems and Progress in Making the February 1972 NIC  
Catalog and Directory

In making sample runs for the author file and a sample listing, Beau has discovered some incompatibility between the old printing directives and what the program now produces and has repaired the print directives.

8c1

19 January 1972

9

Last night I ran Idprog without a hitch except that on the first try it returned the message, user terminated process, after only a few minutes.

9a

Apparently a spontaneous control 0.

9a1

I put the finished file into the output processor which also terminated early on the first try, apparently for the same reason.

9a2

By then it was close to 10.

9a3

I ran the output processor early in the morning with no trouble.

9a4

Barbara and Jeanne have found some problems in the file.

9a5

It is uncertain now whether the problems will demand running it through Idprog again.

9a6

There is a question whether it is better to have the various subsections of the printed Identfile in as large a type as possible or to keep the same type size throughout which means that in a few cases there will be a few lines of tiny types at the top of the page or whether some compromise is best.

9b

Jeanne is worrying this question.

9c

21 January 1971

10

Yesterday on the Ident front -- it proved that NICSTA appeared in the formatted Identfile without an address because it is an unexpanded group.

10a

After lengthy deliberation between Jeanne, Walter, myself, Dick, and Mimi, we decided to fill in the address of NICSTA by hand this time around.

10a1

Hence I ran nothing on the Identfile this night because I believed that we would use the formatted form I had

A Diary of Problems and Progress in Making the February 1972 NIC  
Catalog and Directory

produced Tuesday night with only hand changes that Barbara  
would make today.

10a2

I erred.

10a3

Unknown to me BBN-IMP's name was changed to BBN-NCC and  
there were some other name changes which were entered in  
the Identfile Thursday.

10a4

I should have rerun the file last night, and it would have  
been available today.

10a5

I found out about the name changes early this morning and  
tried to run it this morning.

10a6

It came up with an I/O data error after about 10 minutes  
cpu time.

10a7

I'll try running it again tonight.

10a8

On the catalogue front, Beau continues to run samples.

10b

He has determined that the collector/sorter gives the  
"error message" "exceed capacity" when it is asked to  
collect and sort from a file which contains no example of  
statements that fit its collection criteria.

10b1

24 January 1972

11

Friday night after the dump I collected/sorted the Identfile  
again.

11a

It is worth noting that with no other users on the system,  
the file took about 12 minutes CPU time while almost the  
identical file in previous runs with the load average in  
the neighborhood of 3 to 5 has taken over 17 minutes.

11a1

The total CPU time used in processing the result through  
the output processor does not seem to vary much with load,  
however.

11a2

Thus with a load medium by our standards these days, that  
process is spending more than 25 per cent of its time time  
sharing.

11a3

Sunday morning I put the Identfile through the output  
processor.

11a4



A Diary of Problems and Progress in Making the February 1972 NIC  
Catalog and Directory

Later Sunday morning Ed VanDeriet called me to ask if I  
wanted any of the work I had done over the weekend saved. 11a5

They were having disk problems. 11a6

I told him yes (foolishly as it turned out). 11a7

This morning I learned that the BBN-NET Group had changed its  
name back to BBN-NET so the whole file will have to be done  
again. 11b

On the catalogue front, Beau is taking a second sample file  
through all the steps and when he has done that he will  
practice merging. 11c

He reports he had difficulties this morning, but we did not  
discuss them in detail. 11c1

1 February 1972 12

I have been derelict in my dictating partly because not much  
has been happening that I was involved in directly and partly  
because I had the class on the 27th and 28th which demanded  
preparation on the previous two days. 12a

At the time I wrote the last entry everyone believed that we  
would have to run the Identfile through the collector/sorter  
because BBN had changed their named back from BBN-NCC to  
BBN-NET. 12b

That evening I was discussing the problem with my wife who  
said, "Don't you have something so you can change something  
from one thing to another?" 12b1

Indeed we did I thought; it's called substitute, so I  
substituted in the processed file. 12b2

Barbara repaired by hand the occasions on which BBN's full  
name was spelled out and the missed address of NICSTA. 12b3

Hence, we never needed to run the Identfile through the  
output processor again. 12b4

We gave some thought to changing the print directives to  
reduce the width and length of some pages as measured in  
characters, spaces, and lines, in order to make the  
characters larger on the final photocopied printout but  
decided that it wasn't worth the trouble because certain

A Diary of Problems and Progress in Making the February 1972 NIC  
Catalog and Directory

bits of text were formatted by means of spaces (hence it would be impossible to change the size of the output merely by changing the printing directives).

12b5

So some of the output will be very tiny letters at the top of a nearly empty page.

12b6

We should discuss with Walter more carefully the print directives that idformat produces before we do it again.

12b7

The printed version of the Identfile did not have any NIC numbers and the address for the University of Hawaii was incorrect.

12c

Barbara stripped those in by hand.

12d

3 February 1972

13

I discussed the matter of twokey with Jim Norton, who had met it previously.

13a

It turned out twokey has to be slightly different for author index and title index because the lines are longer in title index (it has to count off more characters to reach the statement number).

13a1

He has a version which works for title index.

13a2

This discussion moved me to establish a file in NIC (nic,keysorts,:xb) into which I copied sort programs used in making NIC catalogues from Jim Norton, Dave Hopper, and myself.

13a3

A second problem in this area yesterday afternoon when I could not find a program to sort numerical statement names in reverse.

13b

This program has to skip the initial parenthesis and letter and sort in reverse on the following digits.

13b1

I had done this in the past and was puzzled by my inability to find an appropriate program.

13b2

Again I talked with Jim, and we found that a program in his directory called numname key which bore an ambiguous comment in fact did what we wanted.

13b3

## A Diary of Problems and Progress in Making the February 1972 NIC Catalog and Directory

I have put a copy in (nic,keysorts,nmr:w) with a new name numbnamer and more explanatory comments.

13b4

Yesterday Barbara, Linda, Priscilla and Mil provided me with lists of files which should contribute to the new NIC catalogue.

13c

Mil put several in the archives, and I gave her list to Bill Ferguson to take out of the archives while I was in a meeting.

13c1

I ran getnic at home.

13c2

It ran smoothly except the machine occasionally popped me out of the collector/sorter level into the command level, presumably because of spontaneous control 0's somewhere, possibly in the terminal.

13c3

I decided to use the name that I used in the procedure I wrote (vannouhuys,recipe).

13c4

Hence, I gave the incremental master catalogue the name A1.

13c5

I put a heading, the result of formatter, called B1, and sent it to the output processor in the morning.

13c6

The output processor didn't finish, also presumably because of spurious control 0's.

13c7

The use was rather quiet last night.

13d

The load average was between 1 and 2 which was fortunate because when I then ran formatter on the new master catalogue it took 55 cpu minutes, finishing just before 10 PM.

13d1

When we looked things over in the morning, we found many duplications.

13e

We tracked them back to a file named partialkarp.

13e1

When Bill Ferguson went with Mil's list of files to be retrieved from the archives, he so an additional file partialkarp which clearly fit into the group, so he removed it from the archives as well.

13e2

When I ran getnic instead of looking at Mil's list or

A Diary of Problems and Progress in Making the February 1972 NIC  
Catalog and Directory

checking Bill's list against Mil's, I merely ran Bill's list. 13e3

Partialkarp was a draft containing 150 duplications of good entries. 13e4

We decided to run getnic again. 13e5

We considered trying to filter out the partialkarp material on the basis of statement signatures, but Mil had put statements in other files that overlapped them in time. 13e6

Beau has just run getnic again. 13e7

There are some problems, but I don't think they're serious. 13e8

Beau is eager to get meaningful action and wants to run formatter tonight which with luck he will. 13f

4 February 1972 14

I started about 9 o'clock last night. 14a

After a little hassle with the Execuport's lock (I didn't know the Execuport had been a victim of police brutality until Dirk told me over the telephone), I set up the Execuport and started by loading Nicprog and running formatter because I had run getnic on the programs earlier in the day and had produced file A1. 14a1

I proceeded with compiling and instituting program formatter which worked out well. 14a2

Then I began the collector/sorter on file A1. 14a3

I was overwhelmed by the incredibly short time that it took to get the input in the collector/sorter and by the comparatively short time that it took for the output processor. 14a4

It took the whole thing less than 20 minutes. 14a5

By that time I think it was around 9:30. 14a6

So I put on my coat and I ran up to SRI to look at the printout. 14a7

A Diary of Problems and Progress in Making the February 1972 NIC  
Catalog and Directory

That was when I noticed that about a fourth of the file had  
been sorted and processed. 14a8

I called Dirk, and I asked him if he thought it might have  
been the fact that I was using my directory instead of the  
NIC directory. 14a9

Really I called for the password of the NIC directory. 14a10

He has told me it was carriage return, but it wasn't. 14a11

It turned out to be ARC. 14a12

So he informed me the cause might have been spurious  
control O's which he had encountered the night before and  
to put it into the cooker again. 14a13

So that's what I did. 14a14

I reran the whole procedure, this time connected to the NIC  
directory. 14a15

Instead of the output being <hardeman>B1 was it was before,  
this time it was <NIC>bee and it ran swell. 14a16

The processing time for the collector/sorter was  
approximately 42 minutes cpu time. 14a17

It was about an hour and a half clock time. 14a18

The output processor took about 15 to 20 minutes. 14a19

To prevent overjubilation, I went back up to SRI at  
approximately 12 midnight to check the printout and it  
looked okay. 14a20

Chuck Irby was there, and he had look at it before I came. 14a21

He said it looked okay to him, too. 14a22

So I went home and went to bed. 14a23

4 February 1972 (Dirk) 15

It looked okay to me, too. 15a

Barbara and Jeanne and Cindy are doing a thorough proofing  
on it. 15a1



If they finish it today, we can merge it with OCT2CAT over the weekend.

15a2

This morning Mil pointed out that 350 of the incremental entries were corrections to OCT2CAT.

15b

She asserted that she could easily remove the 350 wrong entries from the version of OCT2CAT in her directory, thus reducing duplication when the two are sorted together.

15c

Jeanne agreed to this plan, and Mil is going about cutting the wrong entries out of a version of OCT2CAT.

15d

7 February 1972

16

Friday Mil did what she said she would do.

16a

Early Friday afternoon Jeanne and Dick with some contribution from Jim Norton and myself got into a long conversation about how online retrieval should work, whether you should query or browse or what service we could make available that people would use.

16a1

Of course the discussion was not conclusive.

16a2

But somehow following this discussion the printout of the incremental file which had provoked it ended up on Jeanne's desk where it remained until about 11 today when I discovered no one was proofing it.

16a3

I rocked the boat a little, and it got into the hands of Barbara early this afternoon who would be finishing it up if she weren't taking this dictation.

16a4

On the directory front, Barbara asked Joyce in report production if the people over there could collate the dividers into the directory.

16b

She said sure.

16b1

When Barbara checked the file drawer with the dividers, she discovered they didn't match exactly the titles of the various documents that make up the directory.

16b2

Jeanne has decided to reorder the dividers with the appropriate new names.

16b3

Last week I got started putting the directory online with a

A Diary of Problems and Progress in Making the February 1972 NIC  
Catalog and Directory

new set of headings and links in locator, but I was interrupted and have not finished.

16c

8 February 1972

17

Last night Jeanne and I had a detailed discussion of the relations between the old master catalogue in its various forms and the incremental catalogue in its various forms as they are/are to be described in Recipe.

17a

We made a rough flow chart on the board which we agreed we would show to Beau.

17a1

If we can explain it to him, we agree that we will do it that way and he will make a good flow chart.

17a2

This morning Jeanne and I had another discussion in which she pointed out that because 350 entries in OCT2CAT are to be replaced there would have to be a great deal of hand correction if we combined and sorted the old and new catalogue in their formatted form as we planned (e.g., about 1500 statements would have to be removed from the titleword index).

17b

Hence we decided, this time only, not to proceed as we had decided yesterday but to merge the incremental citations into corrected master catalog (correctoct2cat) at the beginning and run it as one catalog.

17c

By good fortune this is exactly the process originally described in recipe and in Beau's flow chart based on recipe.

17d

Proofing is now going on on <nic>beel and the formatted correctoct2cat.

17e

With luck we can combine them tonight.

17f

9 February 1972

18

Monday evening February 7 I (Beau) logged in at 19:22.

18a

My object this evening was to format a file called goodoct2cat.

18a1

This file containing 285 statements was the existing old NIC master catalog minus the corrections and duplications.

18a2

I ran formatter on the file but was concerned with the incredibly short cpu time (appropriately 10 minutes).

18a3

A Diary of Problems and Progress in Making the February 1972 NIC  
Catalog and Directory

I did an output processor and went up to SRI to check the  
printout. 18a4

Sure enough, it was an empty file. 18a5

So I ran formatter again. 18a6

This time the cpu time was more impressive being about 15  
minutes. 18a7

But still this left out that a file of that size could be  
finished in that time. 18a8

So I printed the plex with the x viewspecs on and noticed  
that I had 210 statements. 18a9

I checked the original file of citations and noticed it to  
have 285 statements. 18a10

So I copied statements 211 to 285 into a new file and ran  
the formatter on them. 18a11

The formatted file I then combined with the original  
formatted file. 18a12

This gave me the final formatted file of 285 statement  
which I called <hardeman>finalgoodcat. 18a13

The final formatting and combining took place at SRI  
because I wanted to check the printout again. 18a14

The entire procedure terminated roughly around midnight. 18a15

10 February 1972 19

Tuesday night the system was down. 19a

We couldn't have done anything anyway because Barbara  
wasn't finished proofing and the formatter program wasn't  
running right as we learned the next day. 19a1

Tuesday Mil proofed the formatted winnowed oct2cat against the  
raw winnowed oct2cat; she discovered that the formatter had  
not picked up all the abstracts and brought back to my  
attention that formatter did not always insert the same number  
of spaces between the text and the nic number. 19b

These were bugs in the program and Walter fixed them. 19b1

A Diary of Problems and Progress in Making the February 1972 NIC  
Catalog and Directory

Wendesday morning he sent out a slightly hubristic journal message reporting the fixes and asking, who now can claim it is not perfect? 19b2

That afternoon Mil found a new imperfection. 19b3

The routine in formatter that carries across months of publication recognizes September when it sees an S. 19b4

Thus items catalogued in the raw file with the time of publication "spring" are reformatted into a time of publication, September. 19b5

Walter has reperfected all the formatter programs to take care of this point. 19b6

Wednesday Barbara spent almost all day working on the Baseline, something of a bottleneck. 19b7

On Wednesday afternoon I finished writing recipe to the point of making the RFC Index (not as we are doing it now, but as we will in the future) and gave it to Beau to debug by running it on small sample files. 19b8

Mil was working on winnowing oct2cat. 19b9

The system was unavailable Wednesday night. 19b10

Barbara believed she had finished correcting A1 but this afternoon Mil discovered a set of entries she identified as duplications at the end of a one line printout of A1 that Jeanne had asked Barbara to make so Mil could check for duplications. 19c

These entries were not in the printout of Beel. 19c1

Apparently the printer had bombed out shortly before the end of the file, just before the duplicates began. 19c2

Barbara will take them out in the morning. 19c3

Mil finished today winnowing the duplications out of oct2cat and has provided a list of 3 files which contain all the correct raw entries derived from oct2cat. 19c4

Thus dissolves the one rock we had to stand on. 19c5

## A Diary of Problems and Progress in Making the February 1972 NIC Catalog and Directory

I finished the second draft of recipe and Beau continued debugging on it with sample files. 19c6

The system will not be available tonight. 19c7

11 February 1972 20

This morning we traced the origin of the duplicate statements Barbara/Cindy discovered. 20a

To make a long story short, it goes back to the communication failure between me and Fergie described (link). 20a1

He in fact had retrieved a second extra file to the one in addition we discovered at that point. 20a2

I gave Beau the list of files I actually put in, instead of the list of files Mil had given me and so the extra file got copied in a second time. 20a3

Today Beau is going to put together the three corrected files from oct2cat with A1 and sort them and I will format them over the weekend. 20a4

(Beau is going out of town). 20a5

Beau has also been flow charting and trying out the recipe for how we'll do all this in the future. 20a6

On the Identfile front, having finished the next draft of recipe I have returned to making the parts of the new Identfile, divided into separate files, the objects of the links in locator. 20a7

11 February 1972 -- Barbara 21

After talking to Jeanne, we decided it would be better to delete those duplicate from A1 which were not duplicate in OCT2CAT but were merely entered twice in A1, rather than waiting to format the combined files, proof the formatted file, and then delete the duplicates. 21a

Dirk had said to wait until the files were combined and formatted, but Jeanne felt it would take less time to do it now so I did. 21a1



A Diary of Problems and Progress in Making the February 1972 NIC  
Catalog and Directory

Unfortunately Beau had already combined OCT2CAT with A1 so  
I had to delete the dups from that file (<NIC-WORK>MASCAT). 21a2

The duplicates were Karp things that both Mil and I had  
entered, and there were about 5 of them in all. 21a3

When I tried to do an update file, there wasn't enough room  
in the directory. 21a4

Smokey had promised us 1000 pages on the disk but could  
give us only 250. 21a5

This morning Bill Ferguson gave us another 250, but there  
were used up in combining OCT2CAT and A1 into MASCAT. 21a6

Even though I deleted version 1 of MASCAT, I still could  
not do the update. 21a7

I left at 5, and Dirk and Beau said they would take care of  
it. 21a8

I learned later that Ken Victor gave them 500 more pages  
and that solves that problem. 21a9

14 February 1972 22

Friday afternoon I finished dividing up the Identfile and  
partially completed the new branch for locator. 22a

Thursday Smokey and I agreed to create a new directory to hold  
large catalogue files that exist temporarily. 22b

The previous day Beau had had some difficulty because he  
could not find a directory large enough to hold his work. 22b1

NIC was nearly full. 22b2

The new directory is called NIC-WORK. 22b3

Smokey told me it had a thousand pages. 22b4

I arranged with Beau to go every Monday and throw out files  
that had been there more than a week (link), informing  
everybody involved. 22b5

On Friday morning Barbara found it did not have a thousand  
pages but only 250. 22b6

A Diary of Problems and Progress in Making the February 1972 NIC  
Catalog and Directory

Jeanne asked Bill Ferguson to do something about it, so he gave us another 250. 22b7

In the afternoon Beau found it had only 500 and got Ken Victor to move it to a thousand pages. 22b8

On Friday afternoon Beau put together the master catalogue. 22b9

Friday evening I ran the master catalogue through formatter with no one else on the system. 22b10

It took an hour and 25 minutes cpu time in about an hour and 40 minutes clock time. 22b11

It also failed to delete the XXX sort file which was present in my directory as a file and its partial copy with the content in the partial copy and good. 22b12

On Sunday morning I attempted to process is through the output processor. 22b13

Three times the output processor processed about 300 statements and then spontaneously returned to command level. 22b14

After that I decided to do the file in parts. 22b15

With 1160 statements it will probably take four parts. 22b16

The first three have been processed and printed. 22b17

The system is down at the moment. 22b18

Beau is going to process and print the fourth part when it comes up. 22b19

It isn't clear to me why the output processor is bombing out. 22b20

It acts as it did when the system was spontaneously inserting Control O's. 22b21

But on six tries now it has bombed out each time after almost exactly the same number of statements. 22b22

Is this coincidence or some buffer being exceeded? 22b23

Cindy is proofing the printed parts. 22b24

A Diary of Problems and Progress in Making the February 1972 NIC  
Catalog and Directory

16 February 1972

23

Yesterday Cindy continued proofing the formatted master catalogue.

23a

Barbara pointed out that we needed head matter for distribution of the directory.

23a1

Cindy knows where online files are that can be easily edited to provide the new head matter but hasn't had time to work on it.

23a2

Barbara points out that we should have started fixing up the head matter the moment the directory went to the printer.

23a3

His efforts broke down once on account of a bad file.

23a4

I have been writing the new branch for locator to point to the new online directory.

23a5

It has taken a little longer than I expected because I have had to reformat some of the files.

23a5a

The analyser/formatter can produce a file of only top level statements.

23a5b

For even moderately handy searches I had to put, e.g., the members of a group, as a plex below the statement that names the group.

23a5c

I also had a large file go bad.

23a5d

These presumptive disk errors make me a little nervous for the future.

23a5e

I have been thinking that if the catalog is made in this way again it should be organized as a small project.

23b

I discussed this briefly with Dick who agreed and urged me to make a plan.

23b1

The cornerstone of such a plan in my mind is a critical path type chart with a long dimension of time and a vertical dimension of who is doing the job.

23b2

It would be fairly easy to generate such a chart from Beau's flow chart for Recipe.

23b3

A Diary of Problems and Progress in Making the February 1972 NIC  
Catalog and Directory

I discussed the matter briefly with Beau. 23b4

In the past I believe no one has understood this process well enough to make such a plan. 23b5

But now I believe I do, and I believe the project would actually run easier for all concerned if such a plan existed. 23b6

This morning Cindy finished her proofing of the formatted master catalogue, and it went to Mil. 23c

When Mil is done it will go to Barbara for revision of the master catalogue on the basis of the proofing. 23c1

On the catalogue front we have decided to run getnic on the accumulated files Wednesday night. 24

Beau has continued to run trials on the whole procedure. 25

He has discovered that the program twokey (?) that is supposed to sort author or titlewords alphabetically and within the same author or titleword in reverse order by NIC number, doesn't. 25a

It seems to ignore the NIC number order. 25b

We are going to discuss the matter with Dave Hopper. 25c

Barbara now tells me that Dave is out all week on jury duty. 25d

Beau has been making a trial run through the version of Recipe for use in the future and with the usual amount of confusion it has been working. 26

23 February 1972 27

Mil has finished proofing the catalog for correct y8 and y9 entries and has given it to Barbara. 27a

Barbara will put in the corrections as soon as she finishes generating this week's Baselines (at the latest right after lunch). 27a1

With any luck at all the catalog should be ready to be reformatted tonight. 27a2

Yesterday Jim Norton came to me and suggested that since so

A Diary of Problems and Progress in Making the February 1972 NIC  
Catalog and Directory

much time had elapsed between the cut off date of the catalog and the date it will be printed that just before final printing we run getnic on the journal items that had accumulated in the intervening weeks to bring the catalog close to the date of publication on journal items.

27b

This has two disadvantages: it makes the cut off date of the printed catalogue different for different items and it introduces a new loop in which unforeseen problems can arise.

27b1

It has the advantage of giving an up-to-date feel to the catalog in the kind of document users are most interested in (?) and giving us a chance to run the procedures for adding new items to the catalog in the way described in recipe.

27b2

Pending talking to Dick and Jeanne I agreed to his suggestion.

27b3

24 February 1972 Beau

28

So I started last night about 7 o'clock.

28a

The first thing I did was to check the situation of the disc in the directory nic-work, and I found out that there were 813 pages and there wouldn't be enough space to complete the formatting.

28a1

Since MASCAT was a copy of AA, I copied MASCAT to my directory, Hardeman, and deleted it in the nic-work directory.

28a2

Doing this brought the disc volume down to 603 pages, which was enough to begin work.

28a3

So the time I started (by printing out day time) was Wednesday, February 23, 1972, 18:58:37.

28a4

Then I compiled and Instituted; I collected and sorted the file AA.

28a5

I received an input finished signal after about an hour of real time which struck me as being a little too soon, and it was.

28a6

The cpu time was approximately, on the last reading, 12:29.5.

28a7



A Diary of Problems and Progress in Making the February 1972 NIC  
Catalog and Directory

I did an execute status file and saw that there were 216  
statement in this file, which was about 1/5 of the file  
which had 1170 statements at the beginning. 28a8

So I copied AA to a file called NEWAA, and I deleted the  
first 215 statements in the file NEWAA. 28a9

Then I proceeded to format the file NEWAA. 28a10

In the process of running NEWAA through the  
collector/sorter, I ran into a system error that caused me  
to hurl profanities at the system, etc. 28a11

With very little remorse, I loaded NEWAA and ran it through  
the collector/sorter again. 28a12

This was after I had to delete a dummy file that had been  
created that had the required number of statements, but  
none had been formatted. 28a13

Prior to initiating the collector/sorter I checked the day  
time. 28a14

This time it was 20:49:34. 28a15

Then I began the formatting with periodic ehcks with the  
↑T, the first of which read used 0:16:28.3 in 2:25:44. 28a16

The last one being used 1:33:31.0 in 4:31:22. 28a17

This file formatted number listing had the named  
Feb2numblst1. 28a18

This was had 955 statements, and the total pages in the  
file were 145. 28a19

Before attempting to send it through the output processor I  
recalled the problem we had had before with the output  
processor conking out after 30 pages. 28a20

Since there were already two divisions in the file, I  
thought of dividing the file further into about 6 segments. 28a21

So that's what I did with a series of copying, deleting,  
and outputting (to reduce the number of data pages on the  
disk). 28a22

Between the time that I began and went to bed and woke up

A Diary of Problems and Progress in Making the February 1972 NIC  
Catalog and Directory

the next morning and continued until the system crashed right before leaving for work, the final result was four files of formatted number listing having the name and number of pages as follows\*

28a23

Feb1numblist -- 29 pages.

28a23a

Feb2numblist -- 36 pages.

28a23b

Feb3numblist -- 40 pages.

28a23c

Feb4numblist -- which I didn't have time to finish dividing -- 112 pages.

28a23d

At this point I discontinued and went to work.

28a24

24 February 1972 Dirk

29

Yesterday Jeanne and Beau and I met at Jeanne's request to discuss what he was going to do that evening so that we could all agree on a precise notion of the steps we should take.

29a

As a result of that meeting, the old version of my set of procedures, which described making a master catalog, has been renamed master-recipe and the new version of recipe which describes making increments to the existing catalogs has been renamed increcipe.

29a1

Beau and I and Jeanne discussed printing headings at some length, and Jeanne explained to Beau has to get headings that were necessary to him that were not listed in the master-recipe.

29a2

There have been certain changes in the names and locations of, for example, special sort programs between my writing of master-recipe and my writing of increcipe.

29a3

We agreed that Beau would bring master-recipe up to date with respect to headings, sort programs, etc.

29a4

Jim Norton had gone to Beau the day before with the idea of adding the accumulated Journal items to the various formatted catalogs as RFC's are added to the formatted RFC Index at the end of the catalog making cycle.

29a5

Beau had rejected the idea.

29a6

Jeanne had overhead and when I brought up the matter again

A Diary of Problems and Progress in Making the February 1972 NIC  
Catalog and Directory

agreed with his rejection but proposed that we respond to Jim's feeling that we should have an up-to-date catalog by producing the incremental catalog immediately after we have finished the new master catalogs.

29a7

I agreed but have not talked to Jim about the matter since.

29a8

Beau did not mention that he could not have printed the formatted master catalog last night because he did not know where the headings were.

29b

Jeanne had fished the headings out yesterday afternoon but at a time when both Beau and I were at a meeting.

29c

We did not close that loop until this morning.

29d

Barbara remarks that the printer has been down since yesterday evening, and he couldn't have printed it under any circumstances.

29e

Beau and I and Chuck talked this morning about the problem of the output processor giving up after 30 pages or so.

29f

Chuck asserted that the problem of spontaneous control 0's had been solved and did not know what else could cause the output processor to stop short.

29g

It happens that Chuck was planning to work this evening so they planned that Beau will attempt to process all of AA (210)., so Chuck will see what happens.

29h

In the meantime Beau is dividing it up into bite sized pieces just in case.

29i

It appears to me that the spontaneous control 0 problem which was really hard to find and fix masked some other problem with the output processor.

29j

25 February 1972 -- DIRK

30

Today we could not print the master catalog formatted into numberlist because the printer is down. Jeanne looked at the catalogs online and okayed our proceedings to produce the other indices. The only problem of note was illegal characters in one of the reformatted files. We were going to try to talk to people like Walter and Chuck to try to get to the bottom of this problem. You will recall that idprog

A Diary of Problems and Progress in Making the February 1972 NIC  
Catalog and Directory

produced some files that showed illegal characters when  
statement numbers were on,

30a

The illegal characters in the number listings appear whether  
statement numbers are off or not.

30a1

25 February 1972

31

Last night I (Beau) decided to do my work here at SRI because,  
foreseeing a problem with the output processor I had arranged  
with Chuck Irby to be here to hold my hand when I started the  
operation.

31a

Chuck couldn't come, but he arranged with Bruce Parsley to  
be around.

31a1

Bruce with a thing with one of the formatted files in an  
effort to determine the cause in the event the output  
processor had a malfunction as it has had in previous  
attempts to process large files.

31a2

Because the printer was down, it was impossible to tell if  
the output processor had done its thing properly so, in  
addition to creating the text file that Bruce monitored, I  
created another text file of that same formatted file along  
with four others, the total being the result of dividing  
the original file into five parts.

31a3

This left me with five text files and one additional  
monitor text file.

31a4

We are now waiting the printer to complete the next phase.

31a5

Friday morning Jeanne decided to examine one of the number  
listings using the display and our output device teletype.

31b

In the event that the file looks satisfactory to her, Dirk  
and I will proceed with creating the indices this weekend.

31b1

28 February 1972 -- DIRK

32

The problem for the weekend was directory size limitations.

32a

To review for a moment how the collector sorter works, you  
can put into the collector sorter any NLS file up to the  
largest possible (370 pages) and the collector sorter will  
function properly even if it creates more data because you  
can set a limit to the length of the output file, and it

A Diary of Problems and Progress in Making the February 1972 NIC  
Catalog and Directory

- will go ahead and create a second file and the two files  
will be sorted correct as one list. 32a1
- This capacity is invoked in our work mostly in titlesort  
which creates about  $4 \frac{1}{2}$  statements for any input  
statement. 32a2
- So on Friday night I connected to nic-work which had 1000  
or so free pages and threw in titlesort and soon got the  
error message, "exceed file space allocation".. 32a3
- To make a long story short, the problem is this: even  
though you are connected to a second directory like  
nic-work, partial copies are created in your directory. 32a4
- The problem still arose at one point however on Sunday, and  
I realized that Beau's collector sorter must have had an  
xxxsort1 open at the moment. 32a5
- I connected to NIC instead of NIC-WORK and worked around  
him. 32a6
- There is no xxxsort problem if you are connected to  
different directories. 32a7
- So the collector sorter could create one partial copy (of  
about 300 pages), but when it started to make the second  
dutifully following the limitation I had set for it (1728  
statements), there was no place to put the partial copy  
because it does not update the file until the end. 32a8
- It took me about three hours clock time and 40 minutes cpu  
time to figure this out. 32a9
- Partly because of my own stupidity since my first move was  
to divide the master catalog in two parts of 600 statements  
which simple mathematics shows you is still too large. 32a10
- Finally they ran in four parts. 32a11
- One difficulty remained, however. 32a12
- To have a place for the large output files I had to run  
connected to nic-work. 32a13
- But after I had run each part I had to reconnect to myself  
and delete and expunge the accumulated crap from my  
directory. 32a14



A Diary of Problems and Progress in Making the February 1972 NIC  
Catalog and Directory

The only other glitch worth mentioning occurred Sunday morning when I was putting the four parts through formatting and on three tires the formatter bombed out after 7 or 8 statements.

32a15

I eventually figured out that viewspecs g (branch only) had been turned on somehow, probably in some link I took.

32a16

Viewspect g is a bit of a problem in TNLS because it can be turned on in a link without you knowing it and carried forward.

32a17

I am going to add to the recipes to turn on viewspec h when you start the collector sorter.

32a18

I called the answering service several times on Saturday.

32b

They never had a message newer than the statement on Friday that the system was up, even though it was on the board here that the system would be down until sometime late Saturday.

32b1

Beau and I tested out the intra-computer communications system several times.

32b1a

When on Friday night I divided AA into two parts, I attempted to send him a journal message to this effect, but the error message that was returned was file locked too long.

32b1b

I sent him the same message on Saturday night.

32b1c

I don't know if he ever got it.

32b1d

Sunday morning he linked to me and we had a lengthy discussion of the question of dividing AA in which he mentioned that he had anticipated the problem of the size of the partial copies in individual directories.

32b1e

I guess he didn't mention it to me.

32b1f

I sure wish I had been listening.

32b1g

The only practical problem that arose from two people working on the catalog at the same time, other than the necessity of their communicating with one another the form and names of the master catalogus, had to do with xxxsort1.

32c

A Diary of Problems and Progress in Making the February 1972 NIC  
Catalog and Directory

The collector sorter stores files temporarily in a file  
called xxxsort1 and the corresponding partial copy. 32c1

3c2 If it finds that such a file exists already it returns  
an error message. 32c2

Beau and I agreed to rename such files immediate when we  
finish the run if for any reason we did not want to delete  
them. 32c3

The upshot of all this was that I sorted the title index in  
four files and formatted the four files. 32d

Each file is between 1200 and 1300 statements except part  
2, which is about 250 statements less. 32d1

I sampled part two at length to see if something could have  
been lost and was able to find every number that I tried  
from the master catalog in part two. 32d2

Apparently the problem is only that there are a bunch of  
short titles in part two (fingers crossed). 32d3

This morning I caught Smoky early and he is going to make  
NIC-WORK a user which should ammelliorate the problem of where  
to put large partial copies considerably since we can enter as  
NIC-WORK and work in NIC-WORK and the large partial copies  
will be held in NIC-WORK. 32e

Note: no disc problems. 32f

If there had been, I'd never have made it. 32f1

28 February 1972 -- BEAU 33

I came in Friday evening and began work around 7. 33a

The printer was still down. 33a1

The printer man was here working on it. 33a2

My task this evening was to create the RFC Index and  
process it into a text file to be later copied to the  
printer. 33a3

Everything went smoothly; the RFC Index being not such a  
very large file. 33a4

A Diary of Problems and Progress in Making the February 1972 NIC  
Catalog and Directory

It wasn't even necessary in this case to divide the file  
into segments. 33a5

The whole process took, I guess, about 2-1/2 hours real  
time. 33a6

I now await a printout to test the accuracy of the run. 33a7

Sunday morning I came in around 11 and began to run the  
numberlisting. 33b

I looked in the NIC-WORK directory and discovered that file  
AA had been divided into 5 segments. 33b1

Obviously, this had been done by Dirk. 33b2

To find out why I linked to him. 33b3

He responded by telling me that in doing the titleword  
production, partial copies were created that were too large  
for his directory. 33b4

That was all right. 33b5

Running with the segmented files was actually easier it  
turned out. 33b6

I might add here that there is a problem that arises when  
running simultaneous processes in the collector sorter that  
has to do with xxxsort. 33b7

This has already been discussed by Dirk. 33b8

I proceeded with everything according to plan and again  
await the line printer to test the results. 33b9

Monday morning I tried copying the numberlisting files to the  
printer directory but what resulted was a printout that was  
virtually impossible to read. 33c

This we reckoned was either due to the computer which was also  
having problems in other areas or the printer. 33d

Shortly afterwards the line printer was declared down  
indefinitely. 33e

29 February 1972 -- DIRK 34

A Diary of Problems and Progress in Making the February 1972 NIC  
Catalog and Directory

For the record I should say that the four files containing sorted but unformatted titleword items are Ipartonel through Ipartfourl.

34a

The formatted versions are Jpartonel through Jpartfourl.

34a1

But yesterday I renamed the latter group J1 through J4.

34a2

Yesterday morning I discussed the large body of intermediate files Beau and I had created over the weekend with Bill Ferguson, and I said it was worth the trouble of dumping our directories to get them off the disk.

34a3

So he dumped NIC-WORK, Vannouhuys, NIC and Archive.

34a4

The "I" files and the equivalent files for Numberindex and RFC Index (that is, the sorted by unformatted files) now repose in that dump.

34a5

I then deleted about 900 pages worth of files and Beau must have deleted about 300 or 400 pages worth.

34a6

The system was noticeably slow while Ferguson was dumping.

34a7

It took about an hour.

34a8

But the system was having so many problems yesterday that it's hard to say whether it was the dump.

34a9

Yesterday I set out on the alphabetical shuffle of the Titleword Index (link).

34b

This time it has to go in four parts, a total of 16 files when fully partitioned.

34b1

I am naming them J1ac, J1d1, J1mo, J1pz, J2ac, etc.

34b2

When I am finished the finished files will be named Jac, Jd1, etc.

34b3

Yesterday I successfully partitioned J1 and 2 working on a T-I since the displays were down, but somehow screwed up in partitioning J3.

34b4

This morning I went to look at J3 on the displays which are intermittently up but without the mouse and figure out what had happened, but the system went down complete and I have not fixed it.

34b5

A Diary of Problems and Progress in Making the February 1972 NIC  
Catalog and Directory

Yesterday Mil suggested printing out on the T-I a one-line  
version of the RFC Index for proofing to determine at least  
that everything was there that should be. 34c

Beau gave her the name of the file but inadvertently gave  
her the name of the text form rather than the random form  
so her attempt to print out looked like a bad file. 34c1

That little cycle took till the middle of the morning. 34c2

Beau just gave her the right name. 34c3

Beau has been working on getting the proper headers on RFC  
Index, Title Index and Number Listing. 34c4

The printer has been down, so we have not printed any of  
these files for secure proofing. 34c5

When the printer comes up there will have to be a  
bottleneck in the proofing department. 34c6

As of yesterday evening Smokey had not put in NIC=WORK as a  
user. 34d

I have not tried this morning. 34d1

1 March 1972 35

Jeanne tells me there is a problem with the RFC Index. 35a

The entries that are new to the catalog do not indicate  
correctly the updates and obsoletions. 35a1

Beau has to retrieve the unformatted master file from  
Archive to determine where the problem lies. 35a2

2 March 1972 -- DIRK 36

Yesterday I got the Title sort properly divided. 36a

The problem Barbara mentioned yesterday proved substantial. 36a1

Apparently in making corrections that Mil and Jeanne had  
indicated, she inserted the fact that certain documents  
were updates or replacements of other documents in the  
wrong field (y9 instead of y8). 36a2



A Diary of Problems and Progress in Making the February 1972 NIC  
Catalog and Directory

This is one of the few fields that affects the print out of all the derivative indices.

36a3

This morning Jeanne proposed that she correct the master catalog (AA) and we start over sorting and formatting.

36a4

I proposed instead that we locate the NIC Numbers of the erroneous statements, mask out the others in each file with the content analyser, and correct each derivative file by hand.

36a5

My estimate of the effort involved in the two courses are as follows: to reformat from the master catalog about 6 hours people working time distributed over perhaps 12 hours clock time and making use of perhaps 2 hours cpu time.

36a6

To search for the mistakes by content analyser and repair them by hand about three hours of Barbara's clock and work time and 10 minutes cpu time.

36a7

We decided to reformat from scratch, mostly with the purpose of assuring accuracy.

36a8

So the catalog project now stands where it stood last Friday.

36a9

Today I deleted various permutations of the formatted Titleword Index (Jlac, etc) from the various directories where I had lodged them.

36a10

That amounted to 922 pages.

36a11

Beau is deleting the RFC Index and Number Index.

36a12

We had never done the Author Index.

36a13

2 March 1972 -- Barbara

37

When at 10:40 I tried to load Apartonel I got the message, file does not exist.

37a

Dirk checked with Beau and found Beau had deleted it.

37a1

When the system finally came up at 3:30 or 3:40 it took about 10 minutes to make the 11 changes in the y8 and y9 fields and another 10 minutes to check through the three files (AApart1, 2, and 3) to make sure I hadn't missed any more.

37b

A Diary of Problems and Progress in Making the February 1972 NIC  
Catalog and Directory

Then the system crashed.

37c

I called Dirk at home (he was at Stanford giving a demonstration of our system) and left a message with his wife that said it was okay to run the catalog that night.

37d

Beau had left for the day, and I didn't know how to get ahold of him.

37e

3 March 1972 -- DIRK

38

I worked off site yesterday afternoon and when I came home got Barbara's message that the catalog was back in shape.

38a

I sorted and formatted the first two parts of the Title Index without serious problems last night.

38a1

I took them through the formatting stage rather than sorting all four parts so that I could work on dividing the formatted lists online today.

38a2

A few bits of lore from the working session.

38b

The first is that when I logged in at 8 o'clock there were nine jobs, 5 of them systems maintenance pseudo users and the other three excluding myself were ARPA, MIT, and ILL.

38b1

In one run of the collector/sorter nothing happened.

38b2

That is, it produced a file identical to the source file except in name.

38b3

Careful scrutiny of the printout revealed to me no reason for this misfire.

38b4

I have been making a practice of sorting and formatting with the object files and the output files in NIC-WORK's directory while I was connected to my own directory.

38b5

That saves any reconnecting to my own directory to expunge the lengthy partial copies that accumulate (NIC-WORK has not yet become a user).

38b6

In addition to the deleted partial copies, the xxxsort file and its partial copy have appeared in my directory.

38b7

The partial copy having as much data as the finished file.

38b8

A Diary of Problems and Progress in Making the February 1972 NIC  
Catalog and Directory

Inadvertently last night I did not specify NIC-WORK on the  
name of the output file so it went into my directory. 38b9

In that case the xxxsort file and its partial copy were  
correctly deleted and appeared in my deleted directory  
rather than my real directory. 38b10

Every so often when the sort is running I hit a control T  
because on the previous weekend I apparently lost telephone  
contact with the computer on one occasion. 38c

On that occasion I assumed the computer had crashed, hung  
up for a while, then dialed in again. 38c1

By chance I dialed in on the same number that I had had  
before and lo and behold the computer was up and my job was  
fine. 38c2

One time this evening I hit Control T and got no response  
and then dialed in on the same number and got no response. 38c3

I then believed the system really had crashed. 38c4

In about half an hour I dialed up again and logged in  
successfully. 38c5

But according to Systat, the system had not crashed and I  
was not still on the system although others were that had  
been there before. 38c6

Incidentally, as to users, Jeanne North had come on and  
Tomlinson had replaced MIT. 38c7

6 March 1972 -- DIRK 39

I divided Friday between the telephone order for the office  
shuffle and pod meetings. 39a

On Friday Smokey made NIC-WORK a user, but when you  
attempted to log into NLS the system went into a loop which  
consumed a great deal of machine time. 39a1

Friday evening I attempted to sort the Title Index again. 39b

Whenever I attempted to do a sort I ended up with the  
message, file capacity exceeded, with all my possible jobs  
open so I could not maneuver and with a large collection of  
garbagey files in my directory. 39b1

A Diary of Problems and Progress in Making the February 1972 NIC  
Catalog and Directory

About 11 o'clock Friday I gave up. 39b2

There were plenty of pages available in my directory and in  
NIC-WORK's, that was not the problem. 39b3

Late Sunday morning I logged in again and found that the  
problem had not gone away. 39b4

About that time Beau came in and I linked to him. 39b5

He had discovered the same problem and discovered that if  
you worked entirely in directories other than NIC-WORK  
(using NIC-WORK only to store files moving them in and out  
by the TENEX rename command) everything went smoothly. 39b6

After that I started working in my directory and  
documentation and everything did run smoothly. 39b7

I sorted and formatted the Author Index (documentation,F)  
and the Title Word Index (nic-work,J1,J2,J3,J4). 39b8

This morning I discussed the problem of NIC-WORK with Smokey. 39c

He soon discovered that when he had made NIC-WORK into a  
user the process had returned NIC-WORK to the default  
directory allocation, 250 pages. 39c1

Since there were already over a thousand pages in NIC-WORK,  
nothing could be done. 39c2

Among the things which could not be done is opening an  
initial file. 39c3

Hence the loop in NLS. 39c4

I passed that bug on to Bill Paxton who is going to make  
NLS respond with an intelligent error message. 39c5

Smokey is returning NIC-WORK's allocation to 1500 pages. 39c6

I estimate about an hour and a half of my working time and  
an hour and a half of cpu spread over about 6 hours clock  
time went down that little drain plug, plus whatever Beau  
spent on it. 39c7

There isn't a dump between Saturday morning at 3 and Tuesday  
morning at 3. 39d

A Diary of Problems and Progress in Making the February 1972 NIC  
Catalog and Directory

Beau and I (and other people) working over the weekend and creating large volumes of files which could be deleted from the disc once they are on tape (for example, the intermediate sorted unformatted steps such as I and E).

39e

Smokey and Bill Ferguson are trying to set up a system whereby some directories can be dumped late Sunday night.

39f

This morning Beau and I began chatting about our work, and I mentioned that there were duplicate copies of the four parts of the master catalog.

40

I assumed that he had made them.

40a

He assumed that I had made them.

40b

We both instantly realized that Barbara had made them when she was correcting the errors recorded above.

40c

Hence they were the result of updating and the lower-numbered items might not have all the corrections on them.

40d

In the meantime, I had moved one of each file into documentation by the TENEX command, rename, and it would be a bit difficult (although possible) to discover what version had been renamed in documentation.

40e

We decided the safe course was to ask Barbara to check if her corrections appeared in the various output files which she did.

40f

She discovered only one mistake that had worked through one file and changed it.

40g

It takes teamwork to make a mistake like that.

40h

10 March 1972 -- DIRK

41

Later yesterday I found that Walter had written the analyser/formatter program to remove the statements in the Author Catalog that contain an agency as an author.

41a

I instituted it as a content analyser and assimilated it into a new file.

41a1

It took two minutes cpu time in about 45 minutes clock time, but otherwise ran smoothly.

41a2



A Diary of Problems and Progress in Making the February 1972 NIC  
Catalog and Directory

I set up the headings for this file and sent it to the  
output processor at five o'clock.

41a3

At 5:30 when I wanted to go home it had gotten about 3  
minutes cpu time (I figured it should take about 7) so I  
just left it on an Execuport hooked up through my office  
phone.

41a4

When I returned this morning, I found it had been  
interrupted before it was completed.

41a5

The error message was "undetermined stack overflow".

41a6

I slapped it right back into the output processor at about  
8:15.

41a7

It was still running at 9 after which we are supposed to  
avoid long output processes, but I let it run.

41a8

At 9:45 Smokey took down the system to change drums, and  
there went my text file.

41a9

The error message was again, "undetermined stack overflow".

41a10

Sometime over the weekend I'll run it.

41a11

I spent most of the morning telling a Canadian visitor  
about the system.

41a12

So far today I have managed to get the second part of the  
Titleword Index (J-DL) put together.

41a13

Beau has been cleaning up various problems in the files he  
formatted and printed, e.g., getting rid of the back arrows.

41b

15 March 1972 -- BEAU

42

Last night I reran the corrected Number Index only to find  
this morning that all of the entries with NIC numbers below  
4689 were missing.

42a

I am in the process now of trying to find out what  
happened.

42a1

The probable course will be to format a new listing of all  
the numbers that are missing, format meaning format them  
into a Number Index, unless something else suggests me to  
do otherwise.

42a2

A Diary of Problems and Progress in Making the February 1972 NIC  
Catalog and Directory

15 March 1972 -- DIRK

43

Friday I threw into the output processor the version of the Author Index that had been processed through a special analyser formatter program to remove agencies as authors.

43a

Monday and Tuesday I was sick.

43a1

Today I have been occupied chiefly with meetings and preparations for giving a TNLS course tomorrow and Friday.

43a2

I did check and see that the new Author Index file existed and was of an appropriate length. I sent it to the printer once, but the printer was not working.

43a3

I did not complete reassembling the Titleword Index on Friday, and I will probably not get back to it before next Monday.

43b

21 March 1972 -- DIRK

44

Last Thursday and Friday I did no catalog work because of the TNLS class.

44a

Yesterday Jeanne, Beau, and I met to see where we were.

44b

Beau will report his position separately.

44b1

I was still in the process of reassembling Titleword Sort and had still failed to get a printing file of the Author Index.

44b2

Yesterday I didn't do much because of intermittent crashes and the need to reassemble my office which was moved while I was teaching.

44b3

I did make a couple of more moves in the reassembly and sent the Author catalog to the output processor one more time.

44b4

I came in at 8 to see if the author file had processed and to try to get the rest of the reassembly done before the load got heavy and discovered the system was seriously ill with a combination of disc errors and a problem in xcore which prevents diagnosis of the errors.

44b5

It looks as if it will be down all morning.

44b6

21 March 1972 -- BEAU

45

A Diary of Problems and Progress in Making the February 1972 NIC  
Catalog and Directory

I made the additions to the Number Index last night and ran them through the output processor.

45a

We might repeat that what had been missing were all of the entries with NIC Numbers below 4689 which added up to 91 statements.

45a1

I reprocessed them through the format number program and added them to the previous number index file to find two observable errors.

45a2

The first error might have been the printer -- I got some spurious characters.

45a3

The other one was an extra character on 5804 which has to be deleted so it will line up with the rest of the file.

45a4

The substitute command wasn't working completely, and this has to be checked out.

45a5

That might have been an indication that the system was getting ill, because it sure is sick today.

45a6

22 March 1972 -- DIRK

46

Yesterday afternoon I completed the sorting and reshuffling of Titleword Index and put the printing heads on.

46a

When I left I picked up a terminal to put them through the output processor from home.

46a1

Jeff warned me that it was one of a set of T-I's that had arrived newly and had not been checked out.

46a2

When I got home, I found it had no paper and no power.

46a3

After dinner I brought it back and picked up another one of the untried T-I's.

46a4

I plugged it in and ran it locally.

46a5

When I reached home I discovered I still had no paper, and the terminal did not know about full duplex; that is, every letter I typed was typed by the terminal and also echoed by the system.

46a6

I came back and got some paper.

46a7

A Diary of Problems and Progress in Making the February 1972 NIC  
Catalog and Directory

I then attempted to process the Author Index (F). 46a8

After it had been running a while, I hit a control T to see how much time I was getting, and it started to type "running at 74" and then interrupted itself to say, "undetermined stack overflow, type CA" as if the Control T had screwed something up. 46a9

There was then no text file. 46a10

Then I tried the first part of the Titleword Index (J-AC). 46a11

After about 6 or 7 minutes it popped me into EXEC with the message, illegal instruction at 422312. 46a12

I reset and tried again and it worked. 46a13

Then I went back and tried F again, but I was interrupted by a message that hardware people wanted to take down the system for maintenance. 46a14

The processing of F apparently had been going on successfully, and I had a file of 15 (sequential) pages. 46a15

23 March 1972 -- DIRK 47

Later yesterday morning I talked with Smokey about the output processor breaking down with the message, illegal instruction at some large number, and he opined that it might have been because of drum errors which had crashed the system that morning. 47a

The system remained down yesterday until 4:45. 47a1

Yesterday evening I had a lot of problems similar to the ones I had the night before. 47a2

I had a printout yesterday morning of the Titleword Index section A through C. 47a3

Formatter had previously added an extra space following the word undated on entries for undated items in Number Index. 47a4

Beau had fixed the problem with a substitute and Walter had changed formatter before I ran the Author and Titleword sort. 47a5

Apparently he changed it in a way which put an extra space

A Diary of Problems and Progress in Making the February 1972 NIC  
Catalog and Directory

on the other side of undated, so the changes that I made in the file were wrong.

47a6

Because of this foul up and output processes that had not run to completion and because the system had been down all day at the beginning of last evening I was essentially in the same position as I was the night before (except I had a terminal and it had paper).

47a7

To make a long story short, I got nothing for my last night's efforts.

47a8

The Author Sort (F) came up as a bad file.

47a9

It bombed out a couple of runs on the output processor before I discovered that it was a bad file.

47a10

Runs on the various parts of the Titleword Sort either ended up with the message, illegal instruction at some high number, or were fouled by some form of the undated problems, except M through O which I believed is a good print file.

47a11

This morning I could not print M through I because the printer was down.

47b

I retrieved a copy of F but have not had a chance to look at it because one Tasker is down, and there are no displays free.

47b1

Once last night I reached the point where any command (although I was in my initial file which verified) gave the message, error, including for example such innocuous commands as execute status viewspec.

47b2

Executing quit and resetting and logging into NLS again did not help, but logging out, hanging up, and dialing in again did.

47b3

I developed the theory that the badness of F somehow contaminated the NLS you were using and wasted about an hour this morning testing it inconclusively.

47b4

24 March 1972 -- DIRK

48

After dictating yesterday I succeeded in isolating some problems.

48a



A Diary of Problems and Progress in Making the February 1972 NIC  
Catalog and Directory

The first had to do with "undated" having an extra space attached to it and thus throwing off the print out of the Titleword and Author indexes.

48a1

Beau and I had been attempting to solve this problem by substituting plex.

48a2

It emerges that there is a bug in substitute plex such that when you are substituting for a string which occurs in a few statements in a large file it will make some of the substitutions but not others and feedback to you the number of substitutions it has already made as if it had done its work completely.

48a3

I spent about an hour isolating and repeating this bug which is very troublesome.

48a4

This morning I passed on the problem to Charles.

48a5

I discovered that Bruce had been screwing around with the output processor.

48b

I went to him with my report of the bombing out of lengthy processes with the message, illegal instruction at some number higher than 400000.

48b1

He told me that he had fixed that problem and that should run right tonight.

48b2

During the day yesterday I rescued F (Author Index) from Tuesday night's dump (myself since Ferguson was away) and fixed up the undated problem by putting on the content analyser and deleting or adding characters to each statement that contained undated by hand.

48b3

Last night I went to print all these files.

48c

I quickly discovered that file F rescued from the Tuesday night dump was bad.

48c1

It had the same badness that contaminated further work until you went out and logged in again.

48c2

The output processor was indeed changed.

48d

It no longer gave the message, illegal instruction at large number, but instead simply stopped as if it were finished.

48d1

A Diary of Problems and Progress in Making the February 1972 NIC  
Catalog and Directory

I checked the length of files to determine whether it had completed file or not.

48a2

After 2 or 3 tries on each of the parts of the Titleword Index, I got a file that looked about the right length.

48d3

This process took altogether an hour and 10 minutes cpu time, of which about 2/3's were take up processing files that aborted.

48d4

This morning there were some problems with the printer (excluding the problem that it occasionally substitutes unwanted characters and skips pages in the middle of pages) but in the course of the whole morning I managed to print out the four text files of Titleword Index that I had made last night.

48e

Two of them proved incomplete, the processor having stopped about a hundred statements from the end of the file in each case.

48e1

The other two were complete and without error as far as Jeanne and I can see except that due to some screw up on my part the space around undated was still not right.

48e2

Hence all these files will have to go through output processor again.

48f

The system will be down from 5:30 today until Monday (with luck) to install the disk drives.

48f1

Hence there will be no opportunity to run large files through the output processor until Monday night.

48f2

This being the case I asked Jeanne to proof the files we had for Titleword Index even with the errors noted above to which she agreed.

48f3

If there are changes that need to be made online I can do so between now and Monday night and the next time we print it might be a file which could be our final printing file.

48f4

Because we couldn't run the output processor between now and Monday (the system is incredibly slow), I have not bothered to get an earlier version of F.

48g

27 March 1972 -- DIRK

49

A Diary of Problems and Progress in Making the February 1972 NIC  
Catalog and Directory

Friday afternoon I fixed for the third time the spacing around undated in the Titleword catalogue, put in the NIC Number and the correct date.

49a

I put the first part of the alphabet (J-AC) into the output processor when a general amnesty was declared on processing large files, but it wasn't finished by the time the system went down.

49a1

Jeanne and I agreed that the files I had printed Tuesday and Monday morning of the Titleword Index were good enough for Barbara to do online correcting, but the system was not good enough by Friday afternoon -- one Tasker was down and the system was extremely slow because people were permitted to output process large documents.

49a2

As of noon Monday the system is not up.

49b

If it comes up this afternoon my time will be taken with demonstrations and meetings.

49b1

I have asked Fergie to retrieve F.

49b2

If the system is up, I will try to run the Titleword Indices through the output processor tonight.

49b3

What emerges should be very close to printable but not printable.

49b4

28 March 1972 -- DIRK

50

Last night I took home another screwed up T-I terminals.

50a

This one will not print lower case characters although it has a shift key and will send them to the computer fine.

50a1

So it is quite usable, although it takes a moment to get the hang of it.

50a2

With this terminal I sent various forms of various parts of the Titleword Index to the output processor a total of 11 times last night and this morning.

50a3

Of that number, two created a complete text file.

50a4

This morning when I came into work I tried two more files which failed to process to completion.

50a5

A Diary of Problems and Progress in Making the February 1972 NIC  
Catalog and Directory

Normally the process ended by returning the TNLS herald. 50a6

I discovered the file was incomplete by looking at the number of pages. 50a7

Interestingly enough it at one point created a file which required 17 seconds cpu and contained some 1200 bytes but took up 35 pages. 50a8

I would have kept this file around for curiosity sake had we not been on a push for space because of the imminent arrival of the RP02's. 50a9

On one occasion instead of the herald it presented the message, user terminated process, and on another occasion the message, illegal instruction at 100000001. 50a10

I left the willful scroll of interrupted processes on Bruce's desk this morning. 50b

The outcome of Friday through today's work is that we have three printed files from the Titleword Index good enough to serve as a basis of proofing. 50c

Jeanne has proofed them and Barbara will start making corrections today as soon as the machine comes up. 50c1

(It is now 11 and we have had three crashes.) 50c2

Fergie has been trying to retrieve for me a good copy oof the Author Index (F), but has not succeeded so far because of the crashes. 50c3

If the output processor batting average does not improve, it will require 25 tries to make print files from which we can do the final printing. 50d

28 March 1972 -- BEAU 51

The reason I haven't been entering information is because nothing significant has happened. 51a

Nothing meaning nothing significant in the direction of completing the catalog. 51a1

All that hs been done has been fighting with the system for an opportunity to make the corrections, changes, etc., that have already been indicated. 51a2

A Diary of Problems and Progress in Making the February 1972 NIC  
Catalog and Directory

The last accountable step was yesterday when Cindy made an attempt to make the necessary additions to the RFC Index. 51a3

That means that for my part, the Number List, the Number Index, and the RFC Index are still in the final stage of proofing with Jeanne, Mil, and Cindy. 51a4

29 March 1972 -- DIRK 52

Yesterday afternoon I found that the version of F which Fergie had recalled for me from the dump of the 17th was good. 52a

I fixed up the date and NIC Number. 52a1

The errors were gone and undated had the correct spacing. 52a2

As it later emerged, I neglected to remove the former arrow line from the footnote, but that is not a serious matter. 52a3

Yesterday afternoon Barbara completed changes in Title Index A-O. 52a4

They are ready for final printing. 52a5

Yesterday afternoon I discussed with Bruce our output processor problems. 52a6

He decided to run the files remaining himself so as to set breakpoints and trace down the trouble. 52a7

Last night he ran Titleword P-Z and the Author Index (F) without any difficulty. 52a8

It knows the master's touch. 52a9

Or perhaps the problem lies in the terminals I was using or the telephone connection. 52b

This morning I printed P-Z and the Author Index and gave them to Jeanne. 52b1

28 March 1972 -- BARBARA 53

Today Jeanne spent about an hour proofing J-AC, and I spent about 50 minutes deleting those entries she had indicated should be deleted. 53a

In fact, I deleted one too many statements and had to put



A Diary of Problems and Progress in Making the February 1972 NIC  
Catalog and Directory

that one in again, being careful of the spacing, or I would have finished sooner.

53a1

After lunch the system was down until 2:25.

53b

It took about 25 minutes to delete the junk from J-DL.

53b1

I then started on J-MO, but the system was down from 3 to 4.

53b2

When I reloaded J-MO and did an execute status file at 4:00, I got the message, "bad file".

53b3

I also got a bad file message on a file verify command.

53b4

I went out, reset and entered NLS again, but got the same message when I tried a file verify.

53b5

I had decided to ask Fergie to retrieve a good copy from some previous dump when I told Dirk about the problem.

53b6

He tried some "tricks" and managed to save the file.

53b7

I finished deleting and reinserting statement by 5 o'clock (this time there were four that I had to recreate).

53b8

I told Dirk the status of the file, hoping he would make print files that evening but he didn't.

53b9

29 March 1972 -- BARBARA

54

Jeanne gave me P-Z and the Author Index, but I had a pod meeting this morning, and the system has been down all afternoon, so I didn't work on them at all.

54a

30 March 1972 -- BARBARA

55

This morning I came in early to work on the last part of the Titleword Index (J-PZ).

55a

It took 15 minutes to make the corrections; response was excellent.

55a1

Still before eight, I started on F which went bad.

55a2

Dirk and Jeanne tried copying in EXEC, and I started over but F went bad again.

55a3

A Diary of Problems and Progress in Making the February 1972 NIC  
Catalog and Directory

The message was, illegal user number in header. 55a4

Since it took only 5 minutes to make the corrections, and I felt we were wasting time wondering why the file might be going bad, I want to wait until the drums are in better shape before trying to make the changes again. 55a5

Dirk agreed. 55a6

30 March 1972 -- DIRK 56

I spent all of yesterday afternoon in meetings, and the system was down anyway. 56a

I set out last night to process for final printing the Titleword Index A-O which are divided into three files. 56a1

You will recall that the T-I terminal I have at home has only upper case. 56a2

I had discovered in the past that I could not set viewspecs with them. 56a3

I had been setting viewspecs by inserting them in links. 56a4

But I wondered if that situation might have been contributing to the output processor's spontaneous pseudo-finishings. 56a5

I went in last night with the same terminal as a 33. 56a6

I made a total of four tries through the output process, of which 3 succeeded. 56a7

Once again, the evidence is ambiguous. 56a8

Another curious thing happened last night. 56b

One of the file, J-DL, a file of about 85 pages which normally takes about 15 minutes cpu time to process, took 40 minutes cpu time to process. 56b1

The resulting file ran to completion. 56b2

One memory box was down during the time it was running, but it is hard to imagine that that resulted in the output processor spending 2/3's of its time unswapping. 56b3

A Diary of Problems and Progress in Making the February 1972 NIC  
Catalog and Directory

I just understood why it took the 40 minutes.

56c

When I came in this morning I discovered that the header had somehow been deleted from J-DL, so the file I produced was in the default format.

56c1

That means the output processor had less to do, but it also meant that the output processor was responding to the normal delimiters (period at the beginning, semi-colon at the end), whereas the headers of our catalog files set special delimiters (left and right angle brackets).

56c2

The 25 minutes cpu time was spent looking for periods.

56c3

When I came in this morning I discovered that the DL file was in a bad format.

56d

I also realized that in DL and MO I had not set the page numbers to start counting from the end of the previous section.

56d1

I had intended to allow page numbers to be stripped in.

56d2

When I discussed this with Jeanne, however, she preferred to have me process over the files that were not paginated in order.

56d3

Since DL had to be reprocessed anyway, I went along.

56d4

This means that only A-C is ready for final printing.

56d5

I will run DL, MO, and PZ tonight and maybe the Titleword Index if Barbara has finished correcting it.

56d6

3 April 1972 -- BEAU

57

Friday night I wanted to make output processor files of all of the possible files that I could -- the four number list sections, the number index, and the RFC Index.

57a

I succeeded in making output processor files in only two number list sections because those were the only two that I was aware that were proofread.

57a1

I kept getting undetermined stack overflows on H (Number Index).

57a2

A Diary of Problems and Progress in Making the February 1972 NIC  
Catalog and Directory

After that it was getting late so I didn't stay around to  
deal with the RFC Index. 57a3

Also I wasn't sure if Cindy had finished with it. 57a4

On Monday morning I found that she wasn't through with it,  
so I didn't lose anything by not getting to it. 57a5

Monday morning I succeeded in getting an output procesor  
file of H. 57a6

I put the printed copy on Jeanne's desk. 57a7

Cindy proceeded to make the necessary final changes in file  
D which will produce the RFC Index. 57a8

Then I will go ahead and make output processor files of the  
remaining two sections of Number List. 57a9

3 April 1972 -- DIRK 58

I did run DL, MO, and PZ Thursday night and printed them the  
following morning and gave the printout to Jeanne North to  
decide whether it was ready to go to the printer. 58a

Jeanne has not decided yet. 58a1

I also put the new Titleword Index and Author Index into  
NIC as the objects of Locator. 58a2

Sunday morning I made a print file of the Author Index  
which I printed this morning and gave to Jeanne. 58a3

Those two indices are awaiting her blessing. 58a4

Sunday morning I also ran DL through the output processor with  
no one else on the system. 58b

It took 9 minutes 54 seconds cpu time. 58b1

I attempted to change the delimiters to test it with other  
delimiters but substitute was broken. 58b2

I came in this morning and changed the delimiters one by  
one on display. 58b3

I will run it tonight and see how long it takes. 58b4

A Diary of Problems and Progress in Making the February 1972 NIC  
Catalog and Directory

On Friday Dick and I and Beau and I discussed program running role in catalog making and the reorganization of 3-28.

58b5

I am doing a lot of things and will probably hand over running catalog programs to Beau.

58b6

4 April 1972 -- BEAU

59

I now have all of the necessary files output processed and printed.

59a

They will now be put on Jeanne's desk for final proofing.

59a1

4 April 1972 -- DIRK

60

I now have all the files final formatted and printed.

60a

Jeanne says they are good.

60a1

Jeanne is discussing with Ed bringing the printer up to a reasonable performance before we begin final printing.

60a2

Last night I repeated the output processor on File J-DL (renamed limtest) with and without directives in various forms.

60b

The results were confusing and ambiguous and are reported in a separate journal item.

60b1

5 April 1972 -- BEAU

61

LMAX was set at 130 for the Number Listing which was too long.

61a

So I changed it to 105 on all of the Number Listings, and I reprocessed them and I reprinted them this morning.

61a1

7 April 1972 -- BEAU

62

We discovered today that there were no page numbers on the Number List.

62a

Looking through it we discovered the reason was that in changing the size of LMAX we didn't change the size of the bottom margin.

62a1

So this weekend I will attempt to run output processor on



A Diary of Problems and Progress in Making the February 1972 NIC  
Catalog and Directory

the Number List again; this time all four sections  
together.

62a2

10 April 1972 -- BEAU

63

Yesterday morning at home I attempted to do a re-output  
processing and printing of the Number Listing.

63a

I merged all of the four sections into one file and  
attempted to run it that way.

63a1

Much to my dismay the output processor bombed out at 30  
pages.

63a2

I went back to the four sections and decided to do them one  
at a time.

63a3

My plan was to output process and print it, changing the  
page numbering of the directives on the succeeding file,  
then output process and print again.

63a4

So I came up here to do that and noticed that XCORE was  
bad, which meant no printer.

63a5

Dirk and I discussed that maybe it would be more feasible  
to tape in the correct numbers instead of going back  
through with the output processing of each one.

63a6

This is something I'll discuss with Jeanne.

63a7

11 April 1972 -- DIRK

64

We have bogged down further of course.

64a

The repair to the printer on Wednesday made it worse  
instead of better.

64a1

But that didn't matter because in the meantime I discovered  
that the page numbering on the Titleword Index was wrong.

64a2

I had put the wrong number at the place for the output  
processor to begin counting when it began the separate  
parts.

64a3

I suggested we strip in the right numbers by hand, about  
two hours work.

64a4

But Jeanne wanted to do everything augmentedly.

64a5

A Diary of Problems and Progress in Making the February 1972 NIC  
Catalog and Directory

I had dropped the four part version of the Titleword Index (J A-C etc.) from the disc to save space. 64a6

I was intrigued by the possibility of attempting to run the whole 333 page Titleword Index through the output processor in one blow. 64a7

I tried Sunday morning. 64a8

It is worth noting that when I wnet in a little before 8 o'clock there were 11 users on. 64a9

Six system users, 2 Xerox users, two net users, and myself. 64a10

As it was running I made frequent checks of the system and the time I was using. 64a11

The load average varied between 1 and 3. 64a12

Two other local users, two users from Rome, and one other system user were on at various times. 64a13

After an hour and 40 minute cpu time (extrapolating from running the parts you would expect 40 to 50 minute) when I continued from one of my system check I got the message, undetermined stack overflow. 64a14

I did not want to repeat the experiment. 64a15

In the evening I tried putting through the parts. 64a16

But the runs ended badly for various reasons. 64a17

On one occasion it spontaneously quit early. 64a18

On one occasion it quit with "illegal instruction 010001". 64a19

Another failure is of interest to the question of the output processor's inefficiency. 64a20

I inadvertently began the output processor at a statement following the statement that contains the print directives, so that as in the case above the processor was making default page size and no headers or footers. 64a21

Again it took much longer. 64a22

It was a file that normally runs about 10 minutes and after

A Diary of Problems and Progress in Making the February 1972 NIC  
Catalog and Directory

about 30 minutes I noticed how long it was taking, which  
caused me to study my printout and discover my mistake. 64a23

At that point I killed it. 64a24

Yesterday morning I again urged Jeanne to strip in the  
numbers. 64a25

But she again argued against it. 64a26

The system crashed twice last night, and I was only able to  
run one section (D-L). 64a27

11 April 1972 -- BEAU 65

I had all the intentions in the world of finishing the Number  
List last night, but I called at 6 o'clock only to find that  
XCORE was still bad and the printer wasn't up and probably  
wouldn't be up the rest of the evening. 65a

So I came to work with the same intentions Tuesday morning. 65a1

Visit Log: Dr.Arthur Hastings Friday morning May 19.

Dr.Arthur Hastings will be visiting ARC on Friday, May 19th.His experience with group dynamics seems highly relevant at the present stage of our PODAC activity, and I have suggested that he meet with interested members of ARC to share some of his ideas and observations.

1

Arthur is presently lecturer in Speech Communication at San Jose State College. He formerly taught at Stanford University in the Speech and Drama dept. At Stanford he was also director of the Institute for Science-Fiction and Fantasy.

2

His degree is in public address and group communication from Northwestern Univ. His areas of interest cover argumentation and reasoning processes, human communication, parapsychology and the study of consciousness.

3

He has published a book entitled ARGUMENTATION AND ADVOCACY and has served as Editor of the MacMillan series in Speech and Communication.He has also proposed a computer model of argumentation.

4

ARC-internal Notes on Utility Service Possibilities, a Discussion  
on 1 May 72

Note: The following material (all except this statement) was generated on 1 May 72 as ARC-internal notes. I gave a copy of it to Larry Roberts late that evening, for his private study. After his half-hour visit to ARC the next morning, we developed a set of numbers and their supporting discussion that we have used as our more-or-less "published thinkpiece" (10334,) regarding new-funding needs.

1

Notes re. the TYM-SHARE arrangement

2

We would like figures for their carrying the full burden of acquisition, maintenance, and operation.

2a

PDP-10, plus Secondary File equipment

2a1

TENEX operating system

2a2

Operator support -- e.g., file backup (dump, retrieving), perhaps hard-copy printing and mail delivery

2a3

I envision two separate (relatively) aspects to their service:

2b

TENEX horsepower, with swapping drums, and working secondary file space (on-line).

2b1

Multi-level file service, open ended, including tertiary level that assumedly would include operator service. Thinking of a service that could be used by any NLS user around the net.

2b2

It would be nice if T-S could quote a smooth spectrum of support-level vs. price that we could contract for, being able to increase or decrease the service level relatively easily. This is too much to expect at the outset; but at least it would help to formulate between us and Tym-Share the sort of a partial-computer service arrangements that would be mutually agreeable, and to come to rough terms on cost estimates and delivery arrangements for a few possible partial-computer levels of service.

2c

A real problem, as I see it for the partial-computer service level, is "how would they provide the partition(s) between the different sub-groups of the machine's users?"

2c1

I told Larry that I wanted Tym-Share's first proposal to be based upon one complete IOX module, and that it would probably be difficult to get any reliable numbers for a



ARC-internal Notes on Utility Service Possibilities, a Discussion  
on 1 May 72

smaller initial module by his Wednesday date. He'd like  
our best guess anyway.

2c2

Considerations that seem to offer value to IPT from the proposed  
T-S arrangement (or from our harnessing any good LOX utility):

3

Establishing a prototype example of an IPT contractor  
learning how to be served via a utility.

3a

Getting that much closer to having a utility available to  
other Network users.

3b

We expect the experiment with the NIC to be successful, and  
that there will be a large demand for its service. Making the  
NIC service a solid thing, so that it's role in the Network  
can truly become a significant, readily exandable service.

3c

Assumes we use our energy at the function-development and  
inter-personal communication level.

3c1

The prospects for serving IPT contractors in any of the other  
categories (see our OPT proposal) would depend upon a ready  
means for negotiating and delivering service.

3d

Generally, for giving IPT (and other Net users) dependable,  
expandable, access to the world's best text editor,  
documentation generator, etc.

3d1

For instance, document development (whole range of DPCS)

3d2

Other clients to be approached for supporting the T-S facility:

4

RADC -- they might rather have their own full facility;  
initially they would be better off getting their service this  
way, so we could reasonably expect serious interest on their  
part to buy in for at least a first year.

4a

ARC considerations

5

For every increase in TENEX-based NLS service load, there  
will a bigger commitment for people service (somewhere) to  
support the users. Some types of support (like preparing  
user manuals) don't cost more for more users; but other  
support needs do increase, such as for distributing and  
controlling the documentation, helping individuals and groups  
to get going, helping to adapt the system and/or their working  
methods to each other, helping to field and follow-up on their  
questions and suggestions for changes, etc.

5a

ARC-internal Notes on Utility Service Possibilities, a Discussion  
on 1 May 72

I would plan to approach other agencies for helping to underwrite this first big increment, if IPT doesn't feel up to it; but it would save a good bit of time if there was enough value seen within the IPT plans for them to o.k. the commitment. There would be a very good chance of other income showing up to help carry the load, once the plan got rolling (even before service became available -- e.g., RADC is definitely planning on supporting 12 NLS terminals (a third to a half of a computer?), and is talking seriously about 40 terminals for their continuing experimentation beyond is next 12 months. In what other way could they get going so effectively?

5b

How long a time commitment would T-S require? One year? Two? This would make a significant difference in the problem of covering the commitment.

5c

I believe that in the category of "experimental usage" there is a large market, even looking only within IPT's contractor community, for services that may still be rough in spots but which adds a unique component to what is needed for getting the "Network Experiment" rolling.

5d

Is NLS ready for peddling widely? (I don't think we are talking about "open peddling," where we are inviting all comers to buy -- like businesses, operational government agencies, etc.; these people I'd ask to wait and be supported by systems that commercial people want to support.) The following questions arise in discussing our service-capacity expansion, and should be answered in the foregoing framework:

5e

Stabilizing software first?? Continue providing experimental services.

5e1

What, explicitly, would want to be done before we'd feel right about wider marketing?

5e2

Alternatively, consider the "larger experiment" -- Network interaction, collaboration, etc. -- where there aren't any alternative services available that cover the same coordinated range of features AND are in more serviceable shape. I'd assume that it would be worth quite a bit to get going on experimental usage, assuming that the system's features are serviceable enough to catch hold and to have a reasonable chance of winning a good bunch of customers (the kind who will find value in consistent usage, and who will root for and help promote evolutionary improvement).

5f

ARC-internal Notes on Utility Service Possibilities, a Discussion  
on 1 May 72

How else could a reasonable approach be made to try such as having all ARPA reporting and documentation be developed and accessible on line in coordinated mixed text/graphics (with automatic, high-quality photo-typeset publication), or the IPT Encyclopedia, or collaborative paper writing, or an on-line professional journal, without some system such as ours being very solidly supported? We certainly have learned that availability and reliability have to be high before the best of systems (in term of neat functions) will get the kind of usage that a) makes them really valuable and regularly used, and b) allows them to be evaluated and to provide the foundation upon which to do evolutionary improvement.

5f1

At what level of improvement can we stipulate a willingness to support wide marketing of NLS, Journal, cataloguing, etc.?

5g

Specify utilization stages, involving successively more of our service features, that we can line up against

5g1

What way to treat the expense (of NLS usage) consideration?

5h

DCE tends to want to push for its experimental utilization, cost underwritten by people interested in the Net experiment, assuming that the cost could come down later if the service value picked up.

5h1

KEV 17-MAY-72 14:37 10493

composite of pod responses

this is the composite responses of all the pods the podcom's  
evaluation request. (i apologize for late submittal)

composite of pod responses

Does your POD feel that it has been successful in contributing to the personal and organizational development of ARC and its members?

1

CEDAR

1a

Our pod has been successful in that we have gotten a little better understanding of some of the people whom we would ordinarily not have too much contact with.

1a1

In addition, it speeded up the integration of a new ARC member, i.e. Paul

1a2

However, our pod feels that perhaps the pod mechanism, as it currently exists, is a clumsy and time consuming method for achieving the above ends.

1a3

Perhaps we were unsuccessful in meeting other goals of pods due to a lack of understanding as to what these goals are, were, or should be.

1a3a

We do not feel that pods have contributed greatly to the personnel and organizational goals of its members, except as noted above

1a4

REDWOOD

1b

no.

1b1

weakened existing communication paths by

1b1a

de-emphasizing existing communication paths

1b1a1

difussing peoples available energy and time to communicate.

1b1a2

forced grouping -- not natural groups -- mandatory attendance

1b1b

some people interested in pod-related discussions, but others are not.

1b1b1

Our POD had no focus, it was not a working group; nor could we accept the attitude that we should waste the two hours per week shooting the bull.

1b1c

FIR

1c

We have been fairly successful in personal development just



## composite of pod responses

within FIR pod in that without pod meetings we would never have had the chance to get to know each other as well as we did, and we still feel that there is a lot more to know. It has not been successful in contributing toward the development of ARC as a whole.

1c1

OAK

1d

These notes respond to PODCOM's request that Pods answer certain questions (journal,10225,).

1d1

The answers are based most on discussions in our meeting of May 3, but also on a series of tape interviews of members I made the second week in April.

1d1a

I intend to write up the interviews in a separate document (journal,10318,)

1d1a1

Consensus is not characterisitic of our Pod. In general if one person asserts an opinion, some agree, others disagree, and others remain silent. Their silence is not tantamount to agreement. These notes, then, report a sampling of opinion.

1d1b

1d1c

Some of us believe that our pod has contributed to organizational and personal development and others that it has not. Two people feel strongly that it has not, no one feels strongly that it had.

1d2

several who felt the pod had made no contribution, emphasized that they merely reported what had happened and did not thereby condemn the notion of PODAC.

1d2a

"The lessons we've learned had to be learned..." "It takes three months to learn there's no way to wait out Doug."

1d2a1

several people commented that Pods had helped communication. The opinion expressed by other pods that they had interferred with communication must rerfer to the tendency of the pods to dissipate the tight communication that used to go on in the software group.

1d2b

Two others felt that Pods take time away from discussion of personal and organizational development with members of other pods.

1d2b1

## composite of pod responses

We believe we made a contribution in inviting Gus Matzorkis to speak.

1d2c

"It's never a disappointment any more, and sometimes something nice happens. That's why I'm getting more and more positive."

1d2d

If PODAC were to continue as it exists now, what goals would your POD set for itself and what activities would it undertake in pursuit of these goals?

2

## CEDAR

2a

There are two goals that cedar pod has adopted for itself for the future:

2a1

To attempt to accentuate the positive, rather than spending much energy on negative feelings

2a1a

To try to attain an increased awareness or understanding of each other's points of view with regard to:

2a1b

recognition of problem areas

2a1b1

problem definition

2a1b2

solutions to problems

2a1b3

attitudes towards problems

2a1b4

etc.

2a1b5

To approach these goals, we are going to try the following procedures:

2a2

We feel that having an agenda in advance of a meeting enables members to come to a meeting prepared to discuss an issue.

2a2a

(without an agenda it might be easy to fall into a griping mood)

2a2a1

Having our pod take on, at times, the nature of a study group.

2a2b

This would and could include required reading or studying by the members before the meeting

2a2b1

We are going to have a rotating LEADER of our pod

2a2c

## composite of pod responses

There will be a different LEADER for each pod meeting 2a2c1

Assuming the role of LEADER is a requirement and not  
a voluntary action 2a2c2

It will be the LEADER's choice as to what and how an  
individual pod meeting will discuss and be run 2a2c3

This is subject to the restraints of requests from  
podcom and other pods 2a2c3a

## REDWOOD

2b

learn about the field of O.D. and P.D. 2b1

by reading and discussing books on the subject and  
inviting individuals who are recognized in the field to  
talk to us about it. 2b1a

or possibly treat only non-work related topics 2b2

perhaps share talents or experiences with each other  
(like how to tune an automobile engine). 2b2a

## FIR

2c

Goals: 2c1

1) Get DCE into a pod 2c1a

2) Use pods to get to know each ARC member more  
thoroughly, find out what their jobs are and their views  
on their jobs and ARC. This could clear up a lot of  
confusion on who is supposed to do what, and if somebody  
is not in who else knows how to do it. (For instance,  
does anybody know that Cindy Page knows how to change  
the printer ribbon, make new printer format tape,  
etc.??) 2c1b

3) Find out how ARC fits into ARPA 2c1c

4) Get more teaching seminars. Examples: 2c1d

a. teach DNLS to people who know TNLS 2c1d1

b. teach EXEC to everybody 2c1d2

c. teach L10 to those who want to know 2c1d3

composite of pod responses

d. teach higher level TNLS commands (content analyzer) to those who know a lot about TNLS, but not everything!!

2c1d4

e. technical seminars, example: how to organize timed periodicals, so we can get our catalog etc. out faster and more efficiently

2c1d5

OAK

2d

Our discussion of goals began with some one saying, "We have no goals..if we did set goals we would not state them," but in the following conversation people suggested and endorsed several goals.

2d1

someone said, "It would be nice if this were an energy-gathering place."

2d1a

Instruction in "Mind Dynamics" and massage were suggested and endorsed.

2d1a1

Audio and/or video taping our meetings and rerunning them for self enlightenment was suggested and strongly endorsed. We urged unanimously (except for one member who was asleep, possibly gathering energy) that ARC carry out its long-standing plan to get a video tape machine. This endorsement was the strongest consensus that I remember in our Pod.

2d1a2

Other goals suggested and endorsed:

2d1b

Keeping a personal or group journal of what had been going on relevant to personal and organizational development.

2d1b1

Being more open to suggestions from within the Pod (We have always allowed the veto of any one dissenter to block any plan; people seemed to think we should reexamine this rule).

2d1b2

Fielding meaningful questions from outside the Pod and returning meaningful replies to the questioners.

2d1b3

"We could try to make a serious (non-bullshit) attempt to define personal and organizational development."

2d1b4

What organizational changes does your POD think would strengthen the POD Activity?

3

## composite of pod responses

CEDAR

3a

We would like to see the following organizational rule imposed:

3a1

If a pod requests comments or actions from other pods then the other pods would be required to respond to the requesting pod, even if only to tell the requesting pod why it was not willing to talk about or take action on the request.

3a1a

It is very frustrating to send out such requests and get no feedback whatsoever.

3a1a1

There is some feeling that while the grass roots approach is ok, it might be nice to have some general guidelines come down from either podcom or more especially from Doug

3a2

REDWOOD

3b

FIR

3c

Appoint a seminar chairman who has the authority and management backing to get seminars such as the above organized and on the road

3c1

OAK

3d

In response to questins about how long and how often pods should meet and whether the organization of PODAC should change we talked motly about the possibilities of PODAC's other than pod meetings, that is seminars and special purpose pods.

3d1

Special purpose pods might devote themselves to, e.g. particuar work problems, or sensitivity games.

3d1a

If such other activies became important, we would have to ridevide time accordingly.

3d1b

Should the membership of the PODs be reshuffled -- and with what criteria?

4

CEDAR

4a

We would very definitely like to see a change in pod membership take place.

4a1



## composite of pod responses

The criteria for change that we would like see see adopted is one that maximizes the change.

4a1a

We would like to avoid as much as possible any professional groupings that might arise

4a1a1

We currently feel that three months is/was about the right length of time before an evaluation, (with potential changes in pod members), takes place.

4a1b

However, we feel that as PODAC gains strength, three months might be a little short for the next trial period. Another evaluation should therefore be held three months from now unless the general consensus of ARC is to not hold it.

4a1b1

## REDWOOD

4b

yes,

4b1

General feeling that the membership should change fairly frequently.

4b1a

do not want to talk to same people all the time.

4b1a1

do not want to be limited to a small portion of the group.

4b1a2

possibly people should be able to choose who they want on their pods

4b1b

especially want to meet with and get to know new people or old people which you do not know well.

4b1b1

possibly shuffle them randomly.

4b1c

perhaps 4 would be a better size -- 8 seems too large.

4b1d

## FIR

4c

Yes, pods should be reshuffled. They should be voluntary, and of the volunteers the membership should be decided on between themselves or at random

4c1

## OAK

4d

Our reaction to proposals to reshuffle the Pods was mixed. Two people were strongly opposed, two people in favour with reservations.

4d1

## composite of pod responses

Several people agreed that discussion was easier in groups smaller than 8.

4d1a

We have disagreed strongly several times about the principal of bringing in non-ARC consultants to help us in our Pod functions. Some one suggested that people with strong disagreement on that point should not be in the same Pod.

4d1b

Several people said that they liked our Pod as it is and do not want to change it much.

4d1c

Should the present system of required meetings, once a week, be changed -- and in what way?

5

## CEDAR

5a

We feel that attendance at pod meetings, and participation in PODAC should be required in the near future and until that point when PODAC is sufficiently strong such that required attendance is no longer needed.

5a1

One member felt that since PODAC is Doug's "experiment", that we do not have the authority or the right to change the terms of the experiment, i.e., that attendance is mandatory

5a1a

As to when and for how long pods should meet, we had the following feelings:

5a2

Pods should meet every other week for an entire morning or afternoon

5a2a

pods should meet when they have a sufficient agenda to merit a meeting

5a2b

pods should continue to meet for two hours every week if they would all meet at the same time

5a2c

## REDWOOD

5b

should be changed.

5b1

possibly no regular meetings at all but rather a task to do -- get it done whenever you can.

5b1a

or possibly have a regularly scheduled pod meeting such that all who came would break into small groups and discuss pod-related topics.

5b1b

composite of pod responses

possibly regular meetings which are less frequent and/or less lengthy.

5b1c

FIR

5c

Meetings should continue on a weekly basis. Some people didn't like having them from 3 to 5, because they need to get home or whatever, yet don't want to leave because they are interested in what is going on.

5c1

OAK

5d

With one dissenting vote, we recommended that Pod attendance be officially voluntary.

5d1

pod structure - a chinese menu

this is the chinese menu about restructuring podac. (I apologize  
for late submittal)

pod structure - a chinese menu

There seem to be several options open to us at this time as to how to reorganize PODAC, not all of which are mutually exclusive. In other words there are alot of variables to be considered by PODAC. For the time being we suggest that the following lists be used in a manner similar to a Chinese menu and each POD configure the PODAC of their dreams.

1

#### Variables in PODAC configuration

1a

##### POD size

1a1

4 to 8

1a1a

as dictated by nature of POD

1a1b

as dictated by individual desires - i.e. membership is dependent on an individual's deciding that she wants to join a particular POD regardless of size

1a1c

##### POD composition

1a2

random

1a2a

non-professional special interest

1a2b

professional special interest

1a2c

social

1a2d

##### POD mix

1a3

homogenous

1a3a

any of the above compositions - e.g. some random and some special interest with/without overlap

1a3b

##### frequency of meetings (assuming 5% as per PODAC charter)

1a4

1 week - 2 hrs.

1a4a

at discretion of individual POD based on 5% week e.g. 1 day once a month

1a4b

##### requiredness of meetings

1a5

required

1a5a

at discretion of individual POD

1a5b



pod structure - a chinese menu

requiredness of attendance at meetings	1a6
required	1a6a
voluntary	1a6b
at discretion of individual POD	1a6c