Technical Support Strategic Support Plan Operating Committee Summary April 4, 1988

Technical Support Strategic Support Plan Statement of Objectives April 4, 1988

Overview

The Strategic Support Plan (SSP) is a proposal for offering multiple levels of technical support service to INGRES customers, including premium and economy packages not previously available. Overall, the plan's impetus is the recognition that comprehensive support service is a major component in overall customer success and satisfaction with INGRES.

The SSP also recognizes that premium-quality support consists of not only prompt and expert telephone response, but also application design consulting, problem escalation, prompt bug fixing, emergency onsite assistance, user training, and account management to coordinate all of these services.

Major competitors have recently announced new support services that address these needs. This plan is intended to enable Relational Technology to protect its status as the front-runner in support quality and customer satisfaction.

Objectives of the Plan

The SSP seeks to accomplish the following:

- 1. Give customers additional options for tailoring support services to their needs, both at the high and low ends. In so doing, the plan gives greater definition to service levels in order to set expectation levels accurately.
- 2. Give Premium customers additional account management and more reliable, expert response
- 3. Place Technical Support on a sound financial base by pricing support services with an understanding of their cost, thus assuring the long-term success of the department
- 4. Allow the Sales force to increase its productivity by reducing the number of problem situations requiring its intervention, and providing more positive reference accounts
- 5. Increase overall customer satisfaction with INGRES.

FEATURE COMPARISON OF SUPPORT LEVELS

	Lifeline	INGRES+	Premium	Premium+
Pricing Formula	Blocks of support calls	By machine class as currently, w/ minimum	Projected profit max	cost, plus
IUA Membership		x	x	x
Problem Determination Guides	x	X	x	x
Technical Notes	*	x	x	x
Access to Client News Service	x	x	x	x
Direct problem entry ? to Calltrack			x	x
Regular Phone Support	5 days/ 12 hours	5 d ays/ 12 hours	5 d ays/ 12 hours	
Emergency Phone Support **		*	7 days/ 24 hours	
Phone Support Call Allowance	Limited	Unlimited	Unlimited	Unlimited
Defined Response and Escalation		-	x	X
Account Management			x	x
Onsite Design Consulting ***			X	x
Onsite emergency assistance ***			X	x
Onsite Support Rep(\$)				X
Consulting Discount			10%	20 %

* Extra-charge option

** Off-hour emergency support is not available to Lifeline customers. It is an extra-charge option for INGRES+ customers, and is included in the price for Premium Support customers.

*** One week allowance of each, design consulting and emergency assistance

Est. 12-16 Promiles, Support constances during mext 12-months.

Objectives

- Summarize plan to offer multiple support options to RT customers
- Obtain Operating Committee approval on issues relating to:
 - Premium Support
 - Lifeline Support
 - INGRES+ Support

Premium Support Requirements

- Approval of new Technical Support group to service Premium Support customers
- Approval of three personnel requisitions now for introduction of service July 1, 1988
- Agreement on staff "reorder points" as follows:
 - one technical support staffer for each 4 new Premium Support customers
 - one RPM staffer for each 8
 - one QA staffer for each 16
- Approval of target start up dates:
 - U.S. clients July 1, 1988
 - International Interfaces to U.S. Premium Support to be negotiated later

Lifeline Support Requirements

- Approval of new group to handle Lifeline Support customers
- Agreement to address staffing levels to cover warranty installation support as cost trends become measurable
- Agreement on principles of strict cost controls such as:
 - use of new college graduates to staff
 - limited number of phone calls per customer
 - limited time on product usage questions
 - commitment to development of support tools such as an online technical bulletin board
 - commitment to significantly improving product supportability engineering

Lifeline Support Requirements (continued)

- Agreement on staff "reorder point" of one new Technical Support staff member for each 105 supported licenses (or equivalent blocks of extra calls purchased by existing customers)
- Agreement to address staffing levels to cover warranty * installation support as cost trends become measurable
- Agreement on pricing mechanism such as annual fee per initial block of 5 or 10 calls, and reorder fee for additional blocks of calls
- Agreement on capital equipment (PC and workstations for use by Lifeline Support group)
- Agreement on implementation of warranty card plan

* media warranty + lock manager installation

INGRES + Support Requirements

- Approval to change pricing rules:
 - recoup cost of supporting "child" licenses by limiting to 5 the number of child licenses per parent
 - recoup cost of unlimited support on PC's and workstations, by raising the minimum price for the support component of the INGRES + Support fee to \$3000 (currently \$1250 - \$2000)
 - unbundle the 24-hour support service and impose an extra 10% surcharge on the INGRES + support fee, with the minimum of \$1000
- Agreement to a staff "reorder point" of one new Technical Support staff member for each <u>65-75</u> new INGRES+ support contracts

Premium Support

Present Customers: 0 Current revenue: 0 Forecast through FY 89: 12-15 Forecast through FY 89: \$692.5k Reference: Technical Support Strategic Support Plan, 2/1/88

Features

Proactive Design Consulting Emergency Onsite Assistance Senior phone support staff (separate group) Unlimited calls, 24 hour service Fastpath through Dispatch Fast Response by Tech support staff High support rep-client ratio Proactive management toward problem resolution Ongoing account management, site visits Consulting discounts

Pricing

Sold on a site/environment basis, e.g., all VMS machines at GE/Lynn.

For pricing of Premium Support, a site is defined as a geographically contiguous area that does not cross any political boundaries.

Base price for generic packages is 60k + 3% of site/environment software value (list price) Additional options such as extra support contacts, multiple environments, and additional consulting or onsite assistance are available at listed prices.

Any proposed contract varying standard terms requires advance approval by the director of CS&S

Competitive Information

Oracle has offered several packages with prices ranging \$10k - \$200k added to standard support fees

Oracle's packages stress a number of days onsite but not dedicated expertise at home office Informix offers "Regency Support" tailored for each customer Oracle offers 800# phone line

Lifeline Support

Present Customers:0 Current revenue: 0 Forecast through FY 89: <u>3000-5000</u> (supported licences) Forecast through FY 89: <u>\$3.6 mil - \$6.0 mil</u>

Features

Designed to meet needs for economical support of PC's and workstations Primarily for smaller customers Strictly cost controlled service Limited number of calls, informal time limit on product-usage questions Installation- only support for 30 days free on receipt of warranty card Staffing primarily by recent college graduates

Pricing

Initial 10 calls for \$1195 per site or 5 calls for \$695 per PC Additional 5-call blocks \$495 Installation support free for 30 days after receipt of warranty card or first call

Competitive Information

Oracle offers two plans: Corporate: initial 5 calls for \$1200 plus \$120 per PC - Cincludes Updates Individual: initial 5 calls for \$495 per PC For either plan, additional calls are 10 for \$450 Installation - only support free for 30 days

INGRES + Support

Present customers: 2500 Revenue: \$ Forecast through FY 89: 3500

Features

Re-alignment of existing service level Unlimited calls during business day 24 hour service unbundled as an added cost option Utilizes Dispatch and Knowledge - Queue organization

Pricing

Unbundle hours of support as a surcharge of 10% of standard support fee (\$1000 minimum) Tighten "unsupported licenses" loophole by limiting the number of "child" licenses per parent to five, for new customers

Adopt higher minimum for low end (\$3000 for support component, increased from \$1250 currently)

Need staging of price for PC support depending on site size

Competitive Information

Culpepper survey sites majority of large-scale software packages entail extra charge for 24 hour support

Tesues: To Pricing: (Cost in Margin) * 69,000 min + × 20 * [Jatan and Internet Issues. * (1- 20 disg Ti 7. Killing and collection + MIS impact -The Calculate costs and contributions is dollars, not number of lecense. To need wouldwide pricing & source product - Support - Renewal - Updalc services Thead congruence in pricing model for basic + premium Support A Somebody weeds to our updates responsibility -- pricing, To penetration, collection, "T's s's" To Marketing premium policy The Installation needs to be streamlined.

COST ANALYSIS OF SUPPORT LEVELS

Expected Cost in Hours per Year

	Model #1	Model#2	Model#3	Model#4	Model#5
Basis for Model	Proposed cost- controlled service	Avg of all "Active" Licenses		Avergage of- Tech Support	
Suggested Use for Model	Lifeline	INGRES+	Premium	Premium+ P (TS Onsite)	remium+ (Sales Onsite)
Technical Notes and other docu- mentation	1	2	2	2	2
News Service, Calltrack Management and Tools	1	2	2	2	2
Telephone Support 5/12 Beeper	10 N/A	22.5 *	135 28	22.5 28	45 28
Extra RPM Effort	N/A	N/A	150	150	150
Extra QA Effort	N/A	N/A	75	75	75
Account Mgmt	N/A	N/A	112	28	56
Onsite Design Consulting (Maximum allowance)	*	*	40	0	24
Onsite emergency help without fee (Maximum allowance)	*	*	40	80	80
Onsite Support Rep	N/A	N/A	N/A	1 rep	hired by
Additional Cost for Mul	lti-License S:	ites			Sales
Add'l phone support per child license at site	N/A	6	8	3	4
Add'l account mgmt per child license at site	N/A	N/A	4	1	2
TS Total cost in hours for solitary license	12	26.5	584	387.5 + 1 body	462

Add'l cost in hours per child license at site	N/A	6	12	4	6
Combined TS/RPM/QA/ Consult FTE per suppt'd license:	0.0102	0.0225	0.4966	1.3295	0.3929
Inverse: license to combined headcount ratio (excl onsite rep)	98:1	44.4:1	2:1	3:1	2.5:1
In dollars: (\$80K per FTE for \$100K per FTE for cost includes Engi	Lifeline; INGRES+ and	Premium;	\$50,000 Kcludes Sales	\$133,333 onsite rep)	\$40,000
14% Mgmt overhead	114		7,000		5,600
TS Total	\$930	\$2,565	\$57,000	\$152,000	\$45,000
Add'l per child license at site	N/A	\$510	\$1,020	\$340	\$510

EXPLANATORY NOTES:

1) Most hour-cost figures show the expected average cost for all licenses in that category. In some cases, however, the figure is a maximum allotment of service. This is true of design consulting and emergency onsite work. Service above that threshold is billable.

Design consulting for Premium+ customers with a TS rep onsite is shown with an allotment of zero because we expect this work to be done entirely by the onsite rep.

- 2) Higher allotment is provided for onsite emergency support in the case of Premium+ customers who already have an RTI rep onsite. This may seem paradoxical. The reason is that we assume those customers will expect some coverage for regular onsite reps who are on vacation or away for other RTI-related activities such as training and sales meetings.
- 3) Items marked with an asterisk (*) on this chart are not provided as part of that support level. However, they are available by arrangement either by the customer or by Sales, payable at established rates.
- Site support cost for mincomputer and mainframe licenses can be computed for INGRES+ contracts by aggregating the number of machines.

5) The number of FTE per license is determined by dividing the total hours required per license by 1176 hours, from a calculation of hours available in a year, for a generic phone support staffer, for performing primary duties. This figure was derived as follows:

Nominally available hours/yr	52x40 2080
Less Overhead	
Sick Leave	6x08 48
Vacation Days	12x08
Holidays	10x08 80
Meetings	
Product design input	
Self-training	
Admin (Mail, reports)	
Total Overhead	
Available support hours / yr	1176

- 6) Estimated hours per year of support time was derived from calltrack data for the past year. The model for "Basic" was derived from the average cost for all licenses. "INGRES+" came from the average for all ACTIVE licenses, i.e., everyone who actually used our service. "Premium" support cost was derived from statistics for the top 50 clients in terms of consumption of tech support time. See Appendix A for details.
- 7) As indicated in the accounting above, the only technical duties accounted as part of overhead are self-training and product design input. These are conservatively estimated and are understood as part of the job of everyone in phone support.
- 8) Other substantive duties are itemized individually on the cost-ofsupport matrix above.
- 9) Travel time is not explicitly mentioned, but it is included implicitly in time estimates for account management and onsite emergency support.
- 10) Cost of providing phone support and account management for Premium+ clients is estimated below that of Premium clients. The rationale is that the onsite support rep will take over a large share (though not all) of these duties.
- 11) Documentation and tools are closer to being fixed costs than variable by license. For the sake of simplicity, I've estimated the cost of these services by dividing them evenly over a rough estimate of an average level of 3000 supported INGRES licenses over the course of the next fiscal year. ALSO, it seems helpful in terms of revenue to think about funding these activities by means of a "tax" on top of the support fee. It's actually a fairly small percentage; clearly promotes productivity in order to hold costs down in the future; and provides a dependable way to fund key activities that we've had a hard time justifying in the past.

INGRES Strategic Support Plan April 4, 1988

Table of Contents

Section	Title	Page
1. 1.1. 1.2. 1.3. 1.4.	Overview What Needs Are We Trying to Meet? Summary of Objectives Cost of Supporting INGRES: An Unresolved Problem Relationship Between Funding and Pricing	····1 ····2 ····2
2.	Descriptions of Support Options	3
2.1. 2.1.1. 2.1.2.	Lifeline Option Costs and Pricing Differentiation From Higher Level Options	5
2.2. 2.2.1. 2.2.1.1. 2.2.1.2. 2.2.1.3.	INGRES+ Support Option Costs and Pricing Off-Hours Support Additional Support Contacts Site License Rules	••••5 ••••6 ••••7
2.3. 2.3.1. 2.3.2. 2.3.3. 2.3.4. 2.3.5. 2.3.6.	Premium and Premium+ Options Onsite Services and Account Management Special Phone Support Handling Explicit Escalation Procedures Additional RPM and QA Resources Costs and Pricing Onsite Support Representative	8 10 10 10
2.4. 2.4.1. 2.4.2.	Miscellaneous Other Support Services Client News Service Direct Problem Entry Into Calltrack	12
3.	Cost of Providing Support Service	12
App. A App. B	Data Analysis Underlying Cost Estimates Additional Notes on Workstation Support Cost	

COMPANY CONFIDENTIAL - FOR INTERNAL USE ONLY

Technical Support Strategic Support Plan Executive Summary April 4, 1988

Overview

The Strategic Support Plan (SSP) is a proposal for offering multiple levels of technical support service to INGRES customers, including premium packages not previously available. Overall, the plan's impetus is the recognition that comprehensive support service is a major component in overall customer success and satisfaction with INGRES. The SSP also recognizes that premium-quality support consists of not only prompt and expert telephone response, but also problem escalation, application design consulting, emergency onsite assistance, user training, and account management to coordinate all of these services. Major competitors have recently announced new support services that address these needs. This plan is intended to enable Relational Technology to protect its status as the frontrunner in support quality and customer satisfaction.

Objectives

The SSP seeks to accomplish the following:

- 1. Give customers additional options for tailoring support services to their needs, both at the high and low ends. In so doing, the plan gives greater definition to service levels in order to set expectation levels accurately.
- 2. Give premium customers additional account management and more reliable, expert response
- 3. Place Technical Support on a sound financial base by pricing support services with an understanding of their cost, thus assuring the long-term success of the department
- 4. Allow the Sales force to increase its productivity by reducing the number of problem situations requiring its intervention, and providing more positive reference accounts
- 5. Increase overall customer satisfaction with INGRES.

Support Options: Features and Pricing

1. Premium and Premium+ service is targeted for major clients such as "key accounts" and VAR's (for example, EDS or GE/Lynn), whose critical applications require a high level of support. Bundled services include onsite design consulting, and emergency assistance, account management, defined response and escalation procedures, 24-hour support, and discounts on additional consulting. An onsite representative is available with the Premium+ option.

Pricing of these options is based on a study of costs incurred in supporting 50 of the most visible INGRES customers as measured by their usage of support service. The minimum price of a Premium Support contract would be about \$60K - \$70K. Pricing would be proportioned to the overall size of the INGRES license.

- 2. INGRES+ is most closely aligned with our present service level. It would offer unlimited support calls during normal business hours, with pricing based on overall license value (specifically, a percentage of the total INGRES software value for each operating system environment at a site).
- 3. The Lifeline option is targeted at the small system market and features a fixed yearly allowance of calls and the option of purchasing additional blocks of calls.

Implementation Issues

Timing. We assume most or all of the service levels and new pricing would be in effect by July 1, 1988.

Prerequisites. All service options require the following advance work:

- o Design and production of marketing collaterals
- o Promotional activity including education of the sales force
- o Calltrack enhancements
- o MIS and Accounting changes to allow differentiation of service categories and billing for support calls

In addition, the Premium options require recruiting and organization of a new support group, consisting of a technically-qualified project leader and two or more senior support representatives. The Lifeline option also requires startup of a new group. A programmer is required to develop additional tools needed for both new operations.

INGRES Stategic Support Plan April 4, 1988

1. Overview

This document outlines a plan for offering multiple levels of technical support service to INGRES customers, including premium service packages not previously available. It proposes a pricing structure for these different levels that takes into account the cost of providing service, as well as traditional pricing considerations such as machine class. Major competitors have recently announced new support services that not only address higher customer expectations, but also introduce user access to online systems. This plan is intended to enable Relational Technology to regain its status as the front-runner in support quality and customer satisfaction.

The previous draft of the plan has been reviewed by key RT staff in Sales, Marketing, and Engineering. The present revision has incorporated as many as possible of the improvements suggested during several rounds of discussion.

The plan consists of the following major components:

- o A general statement of purpose, identifying the problems the plan seeks to address
- o A detailed description of proposed service options, including their features and pricing formulas
- An analysis of the cost of providing support service, showing current cost levels as well as projected costs for new services

1.1. What Needs Are We Trying to Meet?

Need #1. Many of our key accounts and VAR's have strongly requested a consistent, premium level of support that RT does not currently offer except in isolated cases. These clients request service which assures

- o Faster and more dependable initial response to calls
- o Explicit escalation policies for problem resolution
- o Consistent interaction with senior support representatives, knowledgable about the client's needs and environment.

Need #2. At the opposite end of the market, a growing number of PC and workstation customers are requesting a more economical support option, similar to what they may be accustomed to receive

from vendors of PC software. RT's support options and pricing have been based thus far on prevailing practices in the minicomputer and mainframe environments.

Need #3. The Technical Support organization at RT, while maintaining a relatively good industry reputation, has tended to lag behind customer demand in its capacity to provide service. Tech support has for significant intervals been under-funded or understaffed relative to the level of service and flexibility expected of it, both by clients and from within RT. There are several reasons for this, but a key reason is the fact that support has never been priced or funded with an explicit recognition of the cost of providing it. Expectations have not been specified clearly, and costs have not been studied in relation to expected service levels.

1.2. Summary of Objectives

The plan seeks to accomplish the following:

- o Give customers additional options for tailoring support services to their needs, at both the high and low end.
- o Give greater definition to the levels of service that RT technical support provides, so that client expectations can be reconciled with our own.
- o Put Technical Support at RT on a sound financial base by pricing support services with an understanding of their cost, thus allowing Technical Support to contribute to the company's profitability and to meet its commitments to its clients and to its own staff.
- Allow the Sales staff to increase its own productivity by reducing the number of problem situations requiring their intervention.
- o Increase overall customer success and satisfaction with INGRES.

1.3. Cost of Supporting INGRES Remains an Unresolved Problem

A major problem this plan does not address is the excessive cost of supporting INGRES. The plan does aim at a compromise that covers costs, meets expectations, and satisfies market pricing constraints. However, such a compromise is tenuous because INGRES costs too much to support. The average customer problem takes 1.5 hours of expert staff time to resolve, and the cost of providing that expert attention is about \$90 per hour. Thus the average cost per support call is about \$135.

The average frequency of calls from a single-cpu, active INGRES licensee is 15 per year. Thus, an average single-cpu site costs RT more than \$2000 per year just in phone interaction and research

time, not counting related costs such as off-hour support, generation of emergency releases, onsite visits, and the apportioned cost of Technical Support's time required for development of internal tools and specialized documentation such as Technical Notes. Details on these costs are provided in Section 3.

At this point it is likely that the cost of supporting INGRES, per license, is rising rather than falling, because the scope and complexity of the product are increasing greatly without commensurate improvement in its diagnostic features.

It is important to stress this problem here, because some of the cost figures presented here are likely to seem unsatisfactorily high relative to market pricing requirements. A concerted effort by RT is required to improve product engineering to reduce the cost of support. In the meantime, support must be funded to cover its requirements based on the current state of product engineering.

1.4. Relationship Between Pricing and Funding for Tech Support

The plan aims at pricing to cover the cost of providing support, and to supply a profit margin as well. However, pricing at adequate levels is just the first step toward financing a successful service. Engineering management must also make a commitment to fund support according to the cost of providing service at predefined levels of quality. In other words, adequate pricing does not translate automatically to adequate funding; the latter requires further that management commit to technical support the revenue nominally collected for that service.

2. Descriptions of Support Options

The following matrix provides a quick summary of the recommended options for support service. The various options are discussed in detail on the following pages.

The "Lifeline" option is targeted at our small system market and features pricing based on blocks of fixed numbers of support calls. Service would be limited to normal business hours.

The "INGRES+" level is most closely aligned to our current offering. It would offer unlimited calls during normal business hours, with pricing based on machine class and overall size of site software contract. Off-hour emergency support would be offered as an additional option on the contract.

"Premium" service is targeted for current Key Accounts and VAR's who desire a higher level of TS interaction, and "Premium+" parallels our current on-site dedicated support plan. These options would offer various special services to the customer. Pricing would be based on overall size of site contract.

	Lifeline	INGRES+	Premium	Premium+
Pricing Formula	Blocks of support calls		Projected profit mar	
IUA Membership		x	x	x
Problem Determination Guides	x	x	x	x
Technical Notes	*	x	X	x
Access to Client News Service	X	x	X	x
Direct problem entry to Calltrack			x	x
Regular Phone Support **	5 d ay s/ 12 hours	5 days/ 12 hours	5 d ays/ 12 hours	
Emergency Phone Support		*	7 days/ 24 hours	
Phone Support Call Allowance	Limited	Unlimited	Unlimited	Unlimited
Defined Response and Escalation			x	x
Account Management			X	X
Onsite Design Consulting ***			x	x
Onsite emergency assistance ***			x	x
Onsite Support Rep				x
Consulting Discount			10%	20%
* Extra-charge of ** Off-hour emerge	ption ency support i	s an extra-c	harge optio	

- for INGRES+ customers. Off-hour empergency support is included in the price for Premium Support customers One week allowance of each, design consulting and
- *** emergency assistance

2.1. Lifeline Option

The purpose of this option is to provide an economical service for customers with limited budgets or who are accustomed to relatively small support fees in the PC marketplace.

2.1.1. Costs and Pricing

The proposal here is to price in terms of initial and supplemental blocks of calls. We need a "site" rate for multiple PC's as well as an "individual" rate for a single PC. The suggested site rate is \$1195 for an initial block of 10 calls. Suggested individual rate is \$695 per PC for an initial block of 5 calls. Additional calls for either type of client would be \$495 for 5 calls.

The pricing schedule proposed for "Lifeline" service is based on Cost Model #1 in Section 3. This is not based directly on historical data. Rather, it assumes that we implement a new type of service and control its cost to run at least 33% below current support cost in hours per call. Limitations must be placed on length of time in handling product-usage questions, as well as on the overall number of calls allowed each customer. Other costcontrol measures need to be phased in over time, such as a dial-in support bulletin board.

2.1.2. Differentiation From Higher Level Options

An important point about Lifeline service is that it will be offered as a lower cost and lower value alternative to INGRES+. Strategic clients with critical production applications would likely become frustrated with the service, and should not be encouraged to purchase it. INGRES+ and Premium Support are realistic alternatives for those customers.

2.2. INGRES+ Support Option

The INGRES+ option would be similar to our existing standard of support service. We would accept unlimited support calls from customers who elect this option, although the proposal would unbundle off-hour emergency support as an extra-cost option. (Note that in the 1987 edition of Software Pricing Trends by Culpepper and Associates, essentially all vendors polled offered telephone support as part of their standard maintenance agreements, but only 33% overall provided 24-hour support. The figure for "Cross-Industry Application Software" vendors was 14%.)

2.2.1. Costs and Pricing

Pricing of this option is critical, because it is our mainstream service and will be chosen by most customers. The proposal here is to continue to price this relative to the total value of the license contract, i.e. by machine class, number of machines, and product mix, but to tighten some loopholes and institute reasonable "floors" for support contract prices. The main problem with current pricing algorithms for medium-size sites is that we collect no support revenue for "unsupported" licenses attached to the site. We collect the same price for one support contact representing 20 cpu's as for one support contact representing one cpu. The following pricing proposal would correct that situation, as well as provide a way for sites to obtain additional support contacts beyond the single primary and backup we currently provide.

1. In its original form, this plan proposed to close the loophole described above by figuring a site support price, using a declining percentage of the entire site/environment software value. MIS strongly objected that such a formula would be too complex to implement in a reasonable time. After Pricing Committee discussions of this point, the plan was modified to recoup cost for future customers by specifying that one parent (supported) license could carry no more than five child (indirectly-supported) licenses with it.

Engineering remains of the opinion that longer-term, a formula based on percentage of site software value will be fairer and more acceptable to customers than the interim solution of limiting the number of child licenses per parent.

- 2. Another pricing change proposed here for INGRES+ service is a \$3000 minimum on the support component of an INGRES+ contract. (Updates would be additional.) The rationale is simply that when customers with low-end systems such as PC's and workstations have unlimited-call access to Technical Support, they use it a rate comparable to customers with larger systems. Appendix B illustrates this fact with Calltrack data. The current minimum prices for the support component of the Standard Support Fee (\$2000 for PC's, \$1250 for workstations) do not cover the cost of providing service.
- 3. One other piece is currently missing from the INGRES+ support pricing puzzle for low-end systems: a way of scaling up the support fee dependent on site size. Such a mechanism is already in effect for workstation licenses but not for PC's. This plan makes no detailed proposal on this, however, because the same need exists for scaling PC software prices or discount levels. A reasonable approach would be to adopt quantitypricing points to be used for both the software itself and for support.

2.2.1.1. Off-Hours Support

After-hours emergency support is not covered by the prices quoted above. The proposal for off-hour support is to place a 10% surcharge on top of the INGRES+ support charge, with a minimum of \$1,000 annually.

2.2.1.2. Additional Support Contacts

Customers have occasionally asked to purchase additional support contact i.d.'s. In most cases, the pricing for this is straightforward -- the incremental fee to upgrade an existing unsupported license to a supported one. In cases where there is no unsupported license to convert, the price is the support fee of the highest machine class already supported at the site. If there is no software license at all with the customer (e.g., a contract trainer), the support contact price is \$5000.

2.2.1.3. Site License Rules

Customers increasingly need and want to run INGRES across heterogeneous environments at a site or between sites. Even if bound together in a single network, separate environments generate their own unique INGRES support problems and require individual support expertise. This proposal assumes that RTI will continue to impose the requirements it currently imposes on site licenses and their accompanying support contracts:

- o Each site consists of machines and support contacts in close geographical proximity with each other. A site may not cross any political (e.g., city county, or state) boundaries.
- o Each separate operating system / machine environment at a site requires a separate license and support contract.

If RTI decides to "unbundle" support, i.e. make support optional rather than mandatory, the following additional rules must take effect:

- o The customer may elect not to purchase any support for any operating system / machine environment at a site, provided that it is not networked for INGRES usage to another environment which is supported.
- o Any environment at the site for which the customer does elect to purchase support must be supported fully, i.e., the support contract must cover all machines running INGRES and all components of INGRES software running in that environment. This requirement is assured by the support pricing mechanism, based on the total software value on that environment at that site.
- o Purchase of a support contract is mandatory for any environment which is networked by INGRES software to another supported environment. For example, it is not an option for the customer to purchase support on PC's running frontends but not on VAXes functioning as the database servers, or vice-versa.

2.3. Premium and Premium+ Options

These premium options are the most significantly different from RT's existing support service. The thrust of these options is to provide a large measure of proactive support, as well as consistently rapid and expert reactive support for clients who want and need it. We have been asked for this kind of service by a number of our larger customers in the past, including VAR's and other clients we regard as "key accounts". Except for a very small number of support relationships established by Sales under the National Accounts program, we have not been able to offer these clients what they were requesting. Special support measures have been offered ad-hoc (for instance, preferential queueing for "key account" calls by calltrack, and "FastPath" handling for certain VAR's), but without any study of the cost or provision of additional resources.

2.3.1. Onsite Services and Account Management

At any rate, the services proposed here go well beyond the ad-hoc measures implemented so far. They include onsite design and performance consulting, with the objective of influencing customer application design, and hardware and software selection, in order to minimize or avoid future problems. A written report would be submitted, expressing the consultant's opinion and recommendations and attempting to set realistic customer expectations. Also included is an allowance for onsite emergency production support; this is frequently needed and expected by large customers in production emergencies.

The plan also provides for continuous account management by a senior staff member or manager in Technical Support, including regular site visits to review the status of the support relationship. Initially, account management is expected to reside with the manager and members of an experienced support group charged with the responsibility of handling Premium-service customers. It is expected that, over time, account management would become a specialized function within that group, belonging to the more senior members. The account manager would work in close cooperation with the Sales and Field Support staff responsible for the account.

2.3.2. Special Phone Support Handling

In the area of phone support, the most persistent requests from large customers are for quick initial response, consistent interaction with a knowledgable, senior-level expert, and explicit escalation procedures. The plan provides all those features. They require some care in being described, since we cannot, for example, make a contractual guarantee to answer a call within a certain amount of time. Here is a suggested description of this feature:

Defined Response

Defined Response means that RT will make reasonable efforts to achieve dependably high levels of responsiveness in the following respects

- initial contact with a technical support specialist

- formal escalation of unresolved problems

Our targets for initial response of a support specialist conform to the severity level of the call. Severity levels have been previously defined in the Technical Support User's Guide. Initial response targets are:

Call Rank	Average Response	Maximum Response	
1 2 3	30 min 90 min	1 hour 3 hours	
3 Off-hour Emergencies	2 hours 1 hour	4 hours 2 hours	

We would expect to hold to the average response targets over each quarter. Reasonable efforts to hold to these will include providing online call monitoring such that responsible staff and management are aware at all times of pending calls subject to these commitment targets; and regular reports to Premium Service customers, documenting in writing our response time on their incoming service requests. Exact numbers in the table above may need to be adjusted based on the implementation of this plan overall. Times for rank 2 and 3 calls entered during the work day are measured during regular service hours. For example, a rank 2 call logged by a West Coast customer at 4 pm Pacific Time would be expected to be returned at the latest by 10 am Pacific Time the next working day. With the advent of the East Coast Support Center, whose services are essentially restricted to eastern clients, our business-hour windows (for measuring our call response time) are as follows for the different North American time zones:

Customer's	TS Business Hours	RTI Office(s)
Time Zone	in Local Time	Providing Service
Atlantic	9 am to 6 pm	ECSC, Alameda
Eastern	8 am to 5 pm	ECSC, Alameda
Central	9 am to 6 pm	Alameda
Mountain	8 am to 6 pm	Alameda
Pacific	8 am to 5 pm	Alameda
Alaska	7 am to 4 pm	Alameda

Even though the business hours of one or another of our offices covers additional hours for some clients (for example, the Alameda support office opens at 7 am Pacific Time, and remains open until 8 pm Eastern time), it makes most sense to standardize on a 9- or 10-hour official period of coverage for each time zone in which to measure our call reponse.

We may also want to consider premium-level dispatch for Premium support customers. Off-hour support is provided as a bundled service, though limited to Rank 1 (emergency) calls.

2.3.3. Explicit Escalation Procedures

Defined Response also entails an explicit problem escalation procedure for Premium-service clients. We will identify the management levels within RTI to which the customer would expect recourse if a problem were not resolved to the customer's satisfaction in reasonable amounts of time. Details are to be determined.

2.3.4. Additional RPM and QA Resources

In addition to the special phone support procedures described above, we can expect Premium Support customers to want and need higher-than-average service from RPM and QA. We will need to make and test special patches and releases much more often for Premium customers than for INGRES+ customers. Accordingly, part of the cost of supporting Premium customers is incremental headcount in RPM and QA, as shown in the cost matrix below.

2.3.5. Costs and Pricing

The costs of providing Premium service are based on the average cost of supporting the 50 heaviest users of Technical Support service. This is itemized as Models #3 and #4, which differ according to whether the plan includes an onsite RTI support representative. whether the onsite rep reports to Sales or to Technical Support.

The price proposed here for extended service is cost plus some reasonable profit margin:

1. The price for a Premium Service contract would be \$60,000 plus

- 2. This would provide all the Premium services outlined in the plan, and authorize one support backup contact to call Technical Support. The customer can purchase additional support contact i.d.'s for \$5,000 each.
- 3. Off-hour support is included in the price.
- 4. For a site with multiple machine and OS environments (and thus, multiple INGRES licenses), normal licensing rules require the customer to pay for at least a Lifeline support contract in each environment. However, we can make the following improvement in service for a site that purchases an Premium support contract for one of its environments: all licenses at the site for which a support contract is purchased at the INGRES+ price can receive Premium level service.
- 5. The supported site must be a geographically contiguous area that crosses no political boundaries.

2.3.6. Onsite Support Representative

We can anticipate that some clients, particularly OEM's and larger VAR's, will request an RTI support representative available at their sites. This option is provided under the label of "Premium+" service. Cost estimates for this service take into account that the onsite support rep will perform many of the services that would otherwise have been performed by the Alameda staff. However, even with an onsite rep we must budget for an above-average demand on Alameda support services from these customers.

The onsite rep would have the following responsibilities:

- Primary contact for support
- Consulting
- Interface with Telephone Support (for problem resolution)

Onsite representatives should be directed by the account manager responsible for the site and potentially could be a Technical Support staff member.

2.4. Miscellaneous Other Support Services

As part of the overall restructuring of support services proposed here, the plan also covers miscellaneous other features. Among these are the Client News and Information Service (A dial-in service available to everyone), and direct problem entry into Calltrack.

2.4.1. Client News Service

The existing "Dialup Bugs" will be enhanced to include Engineering/ Marketing/Training news and potential access to a client information-sharing bulletin board. Over the longer term, it also seems worthwhile to make recent Technical Support call summaries available online, with some kind of search tool for clients to The advantage of this would be, ideally, to dramatically **US8**. increase the ability of customers to diagnose and solve problems without calling Technical Support at all. There is a significant cost to providing this information, which is that it would have to be heavily edited for clarity, technical accuracy, and general appropriateness. There is also a business risk involved, because the information could be damaging from a competitive standpoint if However, the cost-saving opportunity is not edited properly. extremely attractive.

2.4.2. Direct Problem Entry in Calltrack

Premium service customers would be authorized to enter problem reports directly and obtain a call reference number. This is aimed at allowing those customers the ability to enter lower priority calls without having to telephone TS. These calls would not get the same guaranteed response as discussed above. This component is planned for phase-in within 8-12 months. It is not considered a high priority in the implementation plan. A longterm aspect of this should be a feature to allow the caller to check the status of a current problem.

3. Cost of Providing Support Service

The following table shows figures for the cost of providing each level of support, including incremental cost for child (indirectly supported) cpu's where appropriate. A "site" typically consists of one supported license plus a varying number of child licenses.

Expected Cost in Hours per Year

	Model #1	Model#2	Model#3	Model#4	Model#5
Basis for Model	Proposed cost- controlled service	Avg of all "Active" Licenses		Avergage of- Tech Support	
Suggested Use for Model	Lifeline	INGRES+	Premium	Premium+ P (TS Onsite)	remium+ (Sales Onsite)
Technical Notes and other docu- mentation	1	2	2	2	2
News Service, Calltrack Management and Tools	1	2	2	2	2
Telephone Support 5/12 Beeper	10 N/A	22.5 *	135 28	22.5 28	45 28
Extra RPM Effort	N/A	N/A	150	150	150
Extra QA Effort	N/A	N/A	75	75	75
Account Mgmt	N/A	N/A	112	28	56
Onsite Design Consulting (Maximum allowance)	*	*	40	0	24
Onsite emergency help without fee (Maximum allowance)	*	*	40	80	80
Onsite Support Rep	N/A	N/A	N/A	l rep	hired by
Additional Cost for Mu	lti-License S	ites			Sales
Add'l phone support per child license at site	N/A	6	8	3	4
Add'l account mgmt per child license at site	N/A	N/A	4	1	2
TS Total cost in hours for solitary license	12	26.5	584	387.5 + 1 body	462

Add'l cost in hours per child license at site	N/A	6	12	4	6
Combined TS/RPM/QA/ Consult FTE per suppt'd license:	0.0102	0.0225	0.4966	1.3295	0.3929
Inverse: license to combined headcount ratio (excl onsite rep)		44.4:1	2:1	3:1	2.5:1
In dollars: (\$80K per FTE for \$100K per FTE for cost includes Engi	Lifeline; INGRES+ and	Premium;	\$50,000 excludes Sales	\$133,333 onsite rep)	\$40,000
14% Mgmt overhead	114	315	7,000	18,667	5,600
TS Total	\$930	\$2,565	\$57,000	\$152,000	\$45,000
Add'l per child license at site	N/A	\$510	\$1,020	\$340	\$510

EXPLANATORY NOTES:

 Most hour-cost figures show the expected average cost for all licenses in that category. In some cases, however, the figure is a maximum allotment of service. This is true of design consulting and emergency onsite work. Service above that threshold is billable.

Design consulting for Premium+ customers with a TS rep onsite is shown with an allotment of zero because we expect this work to be done entirely by the onsite rep.

- 2) Higher allotment is provided for onsite emergency support in the case of Premium+ customers who already have an RTI rep onsite. This may seem paradoxical. The reason is that we assume those customers will expect some coverage for regular onsite reps who are on vacation or away for other RTI-related activities such as training and sales meetings.
- 3) Items marked with an asterisk (*) on this chart are not provided as part of that support level. However, they are available by arrangement either by the customer or by Sales, payable at established rates.
- Site support cost for mincomputer and mainframe licenses can be computed for INGRES+ contracts by aggregating the number of machines.

5) The number of FTE per license is determined by dividing the total hours required per license by 1176 hours, from a calculation of hours available in a year, for a generic phone support staffer, for performing primary duties. This figure was derived as follows:

Nominally available hours/yr	52x40 2080
Less Overhead	
Sick Leave	6x08 48
Vacation Days	12x08
Holidays	10x08
Meetings	
Product design input	
Self-training	200
Admin (Mail, reports)	360
Total Overhead	
Available support hours / yr	

- 6) Estimated hours per year of support time was derived from calltrack data for the past year. The model for "Basic" was derived from the average cost for all licenses. "INGRES+" came from the average for all ACTIVE licenses, i.e., everyone who actually used our service. "Premium" support cost was derived from statistics for the top 50 clients in terms of consumption of tech support time. See Appendix A for details.
- 7) As indicated in the accounting above, the only technical duties accounted as part of overhead are self-training and product design input. These are conservatively estimated and are understood as part of the job of everyone in phone support.
- 8) Other substantive duties are itemized individually on the cost-ofsupport matrix above.
- 9) Travel time is not explicitly mentioned, but it is included implicitly in time estimates for account management and onsite emergency support.
- 10) Cost of providing phone support and account management for Premium+ clients is estimated below that of Premium clients. The rationale is that the onsite support rep will take over a large share (though not all) of these duties.
- 11) Documentation and tools are closer to being fixed costs than variable by license. For the sake of simplicity, I've estimated the cost of these services by dividing them evenly over a rough estimate of an average level of 3000 supported INGRES licenses over the course of the next fiscal year. ALSO, it seems helpful in terms of revenue to think about funding these activities by means of a "tax" on top of the support fee. It's actually a fairly small percentage; clearly promotes productivity

in order to hold costs down in the future; and provides a dependable way to fund key activities that we've had a hard time justifying in the past.

Appendix A Data Analysis Underlying Cost Estimates

Numbers are extracted from recent Calltrack data on 8200 calls (roughly 8 months of data). Figures are extrapolated to 12 months.

	Lifeline	INGRES+	EXTENDED
Explanation of } model for group}	10-call allowance	Avg of all active licenses	Top 50 users of tech support
Expected yearly number of calls for a SOLITARY supported license	10	15	50
Average call processing time (hr)*	1.0	1.5	2.7
Expected time requirement (hr)	10.5	22.5	135
Additional cost per child license at site (hr)	N/A	5 (20%)	7 (5%)

*Call processing time has been determined for INGRES+ and Premium customers by analysis of Calltrack data. For the proposed Lifeline service, average call processing time is a target, representing an appropriate level of service by this cost-controlled group. It represents a 33% reduction from actual processing time for current INGRES+ calls.

Appendix B

Additional Notes on Workstation Support Cost

Overall support costs presented in Section 3 and in Appendix A do not aggregate figures by machine class. It is Technical Support's experience that low-end machine classes do not cost significantly less per license to support than VAX machine classes and higher. The following Calltrack data for the UNIX workstation market illustrates the point.

Although smaller machines run fewer users, certain problems are aggravated in smaller environments and counteract the effect of the smaller number of users:

- o More limited machine capacity produces more performance problems
- Workstations and PC's use networking more heavily for INGRES than larger machines, and network problems are relatively difficult to diagnose
- o System managers and database administrators in smaller environments tend to be less experienced and need more support than their counterparts for larger environments.

Because INGRES software itself is priced according to machine class (roughly proportional to the number of users or effective throughput), the presumption has been in favor of pricing support the same way. The following comparison of support cost figures for "Workstation" CPU types, against the average for all machine types, suggest that we need to protect ourselves against relying too heavily on that presumption:

	Workstations	All CPU Types
Yearly number of calls per active license	11	15
Adjusted average time spent on each call	1.67 hr	1.5 hr
Support cost in hours per year	18.3 hr	22.5 hr

The method proposed here for coping with this situation is to set a minimum of \$3000 for the support component of the annual Support/Update fee. This would replace current minimums which are as low as \$1250 in workstation environments and \$2000 for the PC. What saves this higher price from being unpalatable to customers is that we would at the same time make available to them the option of subsituting the lower-priced Lifeline service level. We believe customers would then understand the rationale for the higher price for unlimited INGRES+ service.