THE INTERNET
HISTORY
Boehm, Untitled
POETRY

Untitled

by Barry Boehm (stanzas 1 and 2)

Paul Baran came out of the wood
With a message first misunderstood
But despite dangers lurking
The IMP's were soon working
And ARPA did see it was good.

So in place of our early myopia
We now have a net cornucopia
With IMPs, TIPs, and LANs
Wideband VANs, MANs, and WANs
And prospects of World Net Utopia.

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THE INTERNET
HISTORY
Vint Cerf, Requiem
POETRY

Requiem for the ARPANET

by Vint Cerf

Like distant islands sundered by the sea,
We had no sense of one community.
We lived and worked apart and rarely knew
That others searched with us for knowledge, too.

Distant ARPA spurred us in our quest
And for our part we worked and put to test
New thoughts and theories of computing art;
We deemed it science not, but made a start.

Each time a new machine was built and sold,
We'd add it to our list of needs and told
Our source of funds "Alas! Our knowledge loom
Will halt 'til it's in our computer room."

Even ARPA with its vast resources
Could not buy us all new teams of horses
Every year with which to run the race.
Not even ARPA could keep up that pace!

But, could these new resources not be shared?
Let links be built; machines and men be paired!
Let distance be no barrier! They set
That goal: design and built the ARPANET!

As so it was in nineteen sixty-nine,
A net arose of BBN design.
No circuit switches these, nor net complete
But something new: a packet switching fleet.

The first node occupied UCLA
Where protocols and measurement would play
A major role in shaping how the net
Would rise to meet the challenges unmet.

The second node, the NIC, was soon installed.

The Network Info Center, it was called.
Hosts and users, services were touted:
To the NIC was network knowledge routed.

Nodes three and four soon joined the other two:
UCSB and UTAH come on cue.
To monitor it all around the clock
At BBN, they built and ran the NOC.

A protocol was built for host-to-host
Communication. Running coast-to-coast,
Below the TELNET and the FTP,
We called this protocol the NCP.

The big surprise for most of us, although
Some said they guessed, was another
protocol
Used more than all the rest to shuttle
Mail in content flaming or most subtle.

When we convened the first I Triple C,
The ARPANET was shown for all to see.
A watershed in packet switching art,
this demo played an overwhelming part.

Within three years the net had grown so
large
We had to ask that DCA take charge
To operate a system guaranteed
For R&D and military need.

Exploring other packet switching modes,
we built the first spread spectrum mobile
nodes.
The Packet Radio, the mobile net,
worked on the ground and even in a jet.

Deployed at SAC and Eighteenth Airborne Corps,
The Packet Radio unlocked the door
to what we now know as the Internet.
The driver for it all was PRNET.

The Packet Satellite, another new
technique, was added to the net milieu.
And then to shed more light upon the dark,

there came the Ethernet from Xerox PARC.

To these we added yet another thing
from MIT: a local token ring.
We saw the local net techniques compound
until the list could easily confound.

The Internet foundation thus was laid.
Its protocols from many sources made.
And through it all the ARPANET grew more;
It was, for Internet, the central core.

The hardware of the net was changing, too.
The Honeywell was first, and then the SUE,
which forms the heart of Pluribus today
though where this platform sits one cannot say.

The next big change was called the MBB.
It emulated Honeywell, you see,
so one by one they modified each node,
by means of closely written microcode.

Now known as 30 prefixed with a C,
these nodes are everywhere from A to Z.
The European MINET too was full
of nodes like these from Mons to Istanbul.

The second Autodin was long desired
but once accepted instantly expired.
Then to the rescue rode the ARPANET!
And soon the MILNET by its side was set.

By nineteen-eighty DoD opened
its data networks soon must be aligned
with internetwork protocols, to wit:
by eighty-three the TCP was IT!

Soon every host that sat on ARPANET
became a gateway to a local net.
By eighty-six new long-haul nets appeared
as ARPANET its second decade neared.

The NSFNET and its entourage
began a stately national dressage
and soon was galloping at T1 speed

outdistancing its aging peer indeed.

And so, at last, we knew its course had run,
our faithful servant, ARPANET, was done.
It was the first, and being first, was best,
but now we lay it down to ever rest.

Now pause with me a moment, shed some
    tears.
For auld lang syne, for love, for years and years
of faithful service, duty done, I weep.
Lay down thy packet, now, O friend, and sleep.

(for ARPA, see DARPA; for the NIC, see DDN NIC; for TCP, see TCP/IP)

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THE INTERNET
HISTORY
Rosencrantz and Ethernet
POETRY

Rosencrantz and Ethernet

by Vint Cerf

All the world's a net! And all the data in it merely
packets
Come to store-and-forward in the queues a while
and then are
Heard no more. 'Tis a network waiting to be
switched!

To switch or not to switch? That is the question.
Whether
'Tis wiser in the net to suffer the store and forward
of
Stochastic networks or to raise up circuits against a
sea
Of packets and, by dedication, serve them.

To net, to switch. To switch, perchance to slip!
Aye, there's the rub. For in that choice of switch,
What loops may lurk, when we have shuffled
through
This Banyan net? Puzzles the will, initiates
symposia,
Stirs endless debate and gives rise to uncontrolled
Flights of poetry beyond recompense!

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THE INTERNET
HISTORY
Kleinrock, The Big Bang
POETRY
The Big Bang
(or The Birth of the ARPANET)

by Leonard Kleinrock

It was back in '67 that the clan agreed to meet.
The gangsters and the planners were a breed
damned hard to beat.
The goal we set was honest and the need was clear
to all:
Connect those big old mainframes and the minis,
lest they fall.

The spec was set quite rigid: it must work without a
hitch.
It should stand a single failure with an unattended
switch.
Files at hefty throughput 'cross the ARPANET
must zip.
Send the interactive traffic on a quarter-second trip.

The spec went out to bidders and t'was BBN that
won.
They worked on soft and hardware and they all got
paid for fun.
We decided that the first node would be we who
are your hosts
And so today you're gathered here while UCLA
boasts.

I suspect you might be asking "What means first
node on the net?"
Well frankly, it meant trouble, 'specially since no
specs were set.
For you see the interface between the nascent
IMP and host
Was a confidential secret from us folks on the
West Coast.

BBN had promised that the IMP was running late.
We welcomed any slippage in the deadly

scheduled date.
But one day after Labor Day, it was plopped down
at our gate!
Those dirty rotten scoundrels sent the damned
thing out air freight!

As I recall that Tuesday, it makes me want to cry.
Everybody's brother came to blame the other guy!
Folks were there from ARPA, GTE, and Honeywell.
UCLA and ATT and all were scared as hell.

We cautiously connected and the bits began to flow.
The pieces really functioned—just why I still don't
know.
Messages were moving pretty well by Wednesday
morn.
All the rest is history—packet switching had been
born!

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