TECHNICAL MEMORANDUM

To: General Distribution

Project: CLOUT

From: Dave Ihnat

CC:

Date: 15 Apr 17 Last Modified: 04 Jun 18

Subject: CLOUT Document Resurrection

---

1. INTRODUCTION

This portion of the document is applicable to and should be read prior to perusing to each of the recovered CLOUT documents. It is intended to give a brief explanation of what triggered the creation of CLOUT, and why the documents are being presented in the current format.

1.1 EARLY USENET AND ELECTRONIC MAIL

By the mid- to late 1980's, USENET had formed the earliest general backbone of what became the Internet. It relied on Unix and UUCP to transfer information as documents—as did electronic mail at that time.

There were two major issues confronting the growth of E-Mail at that time. First, there were effectively no Internet Service Providers; from the earliest ARPANET days, only DARPA and/or DoD contractors—usually corporations and educational institutions—had any reasonable access to ARPANET, and then USENET. This also meant that there were very few gateways and distribution hubs available outside these organizations. More on that shortly.

The second problem was that delivery of E-Mail—and USENET postings—relied on the sender knowing the entire path of intermediate machines between his/her machine and their destination. Not just knowing the machines, but knowing which ones would accept messages for relay. This resulted in having to build a "bangpath", e.g. "brewhost!uofc!rand!joe". This was complex, failure-prone, and tedious, to say the least.

The Rutgers *UUCP Mapping Project* (google for it!) was an attempt to resolve the latter problem. Essentially, they undertook to collect information from sites volunteering to forward UUCP traffic; this information included machines that could be directly contacted by the site. These were then massaged to provide a database of paths from point A to point B (if one could be constructed.)

But the thing that really kicked off a workable network was a number of sites that were well-connected and willing to act as "hubs". Over time, these generally reduced the bangpath to a single hop, or at most a couple of hops. In the Midwest, the killer hub turned out to be machine "ihnp4" at Bell Telephone Laboratories in Naperville. Gary Murakami, a BTL employee in charge of the machine, was the instigator and mentor for this, and the end result was significant growth in electronic mail in a multi-state area.

Unfortunately, this resulted in increased operating costs—and ultimately, around 1988, BTL management realized this. The long and short of it was that Doug Price, who had inherited administrative responsibility by that time, was told to cease operation of open forwarding by "ihnp4". This was potentially catastrophic—it effectively meant the free growth and operation of electronic mail in a large portion of the Midwest would come to a grinding halt. This would necessarily have significantly disrupted E-Mail for most of the country, as well.

To determine how to address this problem, the Chicago branch of the professional user's group */usr/group,* specifically */usr/group/chicago* (later to become *Uniforum Chicago*), decided to host a conference to address the issue. This conference was held in Naperville sometime—the exact date escapes me—in 1998.

Among the organizers were Dave Ihnat and Doug Price. They wrote documentation of the incipient problem, as well as working (with the rest of the */usr/group/chicago* Board) on organization, invitation, and final execution of the conference.

1.2 THE CLOUT PROJECT

At the conference, in the course of informal discussion, the idea of a cooperative group of machines utilizing a particular version of UUCP (Honey-DanBer) that could "masquerade" as virtual distribution hubs arose. Dave and Doug eventually documented these ideas, presented them to */usr/group/chicago* with the preliminary monicker of *The CLOUT Project*.

Ultimately, this resulted in a more formal specification generated by */usr/group/chicago*; funding for physical machines to support the effort; and volunteer administration. For a number of years, the CLOUT Project provided free electronic mail interconnection and forwarding, ultimately resulting in survival of E-Mail until the rise of commercial Internet Service Providers, and evolution of more sophisticated delivery mechanisms, could pick up the task. While it's likely another solution may have arisen, none was visible at the time; it can be reasonably argued that this effort saved years of confusion, and maintained the free nature and growth of E-Mail at that critical time.

1.3 DOCUMENTATION

The CLOUT project was a remarkable response by computer scientists and information technology professionals to this crisis in the early days of the Internet. Unfortunately, documentation was prepared as a number of documents making use of the BTL Unix *nroff/troff* typesetting package and the BTL utility *pic* and memo package *mm*. Aside from the fact that these were in wide use at the time among Unix users, there was also a belief that such typesetting packages would be more resistant to technology evolution than proprietary versions of word processing binary files such as those provided by WordPerfect and Microsoft Word (not to mention that, at the time, typesetting was more sophisticated than the word processing formats.)

Unfortunately, over time the original versions of the documentation that had been prepared was misplaced, and copies haven't been located, either of distributed input, or formatted versions of the documents. This was the case for almost 30 years. However, just recently (14 April 2017) Dave Ihnat located an archive of some of these documents.

And also unfortunately, time has generally passed by *nroff/troff* and their macro libraries. It turns out that these documents, when "fed" through the version of these programs and libraries available on Linux, don't properly format. Efforts will continue to try to modify the input to produce formatted documents that reflect the appearance of those distributed at that time. But in the meantime, to preserve the *content* of those documents, Dave is importing it into Microsoft Word

format. Some information won't make the move—there are several *pic* input files that will have to rely on the reformatting effort to see the light of day. But the information that can be transcribed is presented as accompanying memoranda to this document, in as close to the original layout as possible.

Please don't point out errors in spelling, punctuation, etc. in the documents—these were transferred along with all the rest of the information. Similarly, the font and size were selected to attempt to recreate as closely as possible the appearance of the originals. Some font sizing was changed when embedded tables—which didn't print all that well In The Day—were too big to reasonably fit on a page.

1.4 REQUEST FOR PAPERS

Anyone who reads this and may have access to any more of the original documents—in *nroff/troff* input form as data files, or formatted either as data files or printed documents, is solicited to send a copy to Dave Ihnat. He will continue to collect available information in an attempt to provide more complete documentation of this important period in the evolution of what became a major component of today's Internet.