UWO Network Liaisons and Network Installation Processes: Presentation to the Senior Director

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This document is also available on-line in hypertext format via the World Wide Web as `<URL:http://www.uwo.ca/its/network/backbone/liaison-talk/>`.

Supplementary documents: *The UWO Network Handbook*[1], *How do I...* Get Connected to the UWO Backbone,[2] *UWO Network Policies and Procedures Manual*,[3] *Network Install Process:* Report of Ad Hoc Group (July 95).[4]

1 The History and Context

- In the beginning there was the NIC and the NOC . . . a few people trying to do a big job. They were
  - inundated with requests for connection to the backbone and response times were slow for making minor updates to the DNS data
  - not familiar with the customer environment (since they were perceived as Unix people that didn't appreciate PCs and LANs)
- Our response was to set up the Registration Improvements Group (RIG)[5] in June 1992 made up of most of the Distributed Services Team, all of the Network Services Team and a scattering of others which for three years has been continuously improving the process for getting new sites onto the campus network. Something must have worked as the network has grown quite quickly!
- A major part of the RIG process was a structure for distributing the responsibilities for getting people onto the network. We defined the NIC as the central clearing house for the information. We assigned a liaison from

[1] URL: http://www.uwo.ca/its/doc/manuals/handbook/
[2] URL: http://www.uwo.ca/its/doc/hdi/infoservices/i14-backbone.html
[3] URL: http://www.uwo.ca/its/doc/manuals/network-policy/
[4] URL: http://www.uwo.ca/its/network/backbone/bookstore/
[5] Now known as the Network Liaisons Group.

ITS to work closely with a Technical Contact from the department to get the network off the ground. The Technical Contact formally takes on a number of responsibilities and duties for the new network.

- The Network Liaison has a role of education and helping smooth the registration process. We found that it was important that the Liaison have some knowledge of the environment into which they were going. Thus Mac experts were assigned to Mac dominant sites, Unix people to workstation groups and PC people to PC sites (and generalists to the mixed sites. . .)
- Members of RIG wrote the extensive handbook, *The UWO Network Handbook*[6] and a *How do I...* [7] to provide background material and to document the processes involved in connecting to the campus backbone. The *Handbook* provides a single easy to understand source of all registration related information as well as explanations of networking concepts and practical how-to advice on setting up workstations and servers on the campus network. In addition, the NIC and the NOC have implemented procedures to make the processes of registration and keeping that information current smoother, faster and more consistent.

2 A large and complex undertaking

- Getting a department onto the campus network is probably one of the few functions that ITS performs that includes or can include almost all parts of the Division (so much so that we often find ourselves bumping into each other):
  - First client contact (Almost anyone at ITS can be tapped for this job)
  - Network planning and consulting (Everybody: Hardware Services, Ted, NIC, NOC, DAS Technical Support, DAS System Support, Telecom, FST, DST, . . .)
  - Ted and hardware services for network design
  - The store for systems and boards
  - DAS System Support for coordination, EMC2 and ENCORE
  - Distributed Services and DAS System Support for workstation support
  - Telecom to run the wires
  - Network Services to get the obligations signed and the machines registered and then to get the routers configured
  - Distributed Services and DAS Technical Support for LAN support
  - Front-line services because what they really want is Netscape

  See figure for a simplified view of the process involved.

[6] URL: http://www.uwo.ca/its/doc/manuals/handbook/
[7] URL: http://www.uwo.ca/its/doc/hdi/infoservices/i14-backbone.html

- Currently there are 27 people at ITS on the liaisons mailing list. These people are involved as liaisons (18) to various departments and units across the campus, members of the NIC or NOC who work behind the scenes to get people connected and smattering of managers of these people (Peter, Gary, Charleen and Vivi). Currently almost all of DST and NST are involved with smaller representation from four other ITS groups: FST, DAS Systems Support, Hardware Services and CAST.
- **We aren't finished yet:** While we have over 4,800 connections to the network, some 250 of those are PPP/SLIP connections, and probably around 1,000 of them are labs. But, there are about 8,000 employees at the University. So, we don't even have half of the faculty and staff on the network. The Faculty of Arts, for example, has a very long way to go before everyone is connected. It could be argued that we now have the *easy* ones with the hard ones (the fringe — the non-traditional customers of ITS) to follow. Thus it is worth continuing and improving this process.

  Looking at this in another way, we have about 230 campus units listed in the directory. About 160 to 200 of these have been assigned a domain or are included in a domain already defined. So this looks as if we are nearly complete but much of the work still has to be done to expand existing networks. Of course, many of the older networks, some first set up in 1988 or earlier, are ready for an extensive refit — Engineering is an example of such a site (but we haven't handled their upgrade all that well. . .).

3 The Problems

3.1 Network Liaisons:

- **Assigning Network Liaisons:** It is very difficult to assign a liaison to a new site especially when PC expertise is necessary — it's like pulling teeth — people don't have enough time and some managers support their staff in avoiding this task although the situation may be improving.
- **The Network Liaison role:** The Network Liaison job was originally defined to be fairly intense for a short period of time while a new network was being registered. Then it tails off to a once-a-year renewal check (or an update when the technical or administrative contact changes at the site). The service was defined to be one where no charges were levied since this was part of keeping the campus network running.

  In many cases a different scenario prevails. The Liaison takes on many of the roles of the Technical Contact and the apron strings are never severed. This can happen when there isn't really an appropriate Technical Contact to take over at the site (often combined with an unwillingness to pay for this service) or it could be just a result of ITS people being accommodating.
- **Bottom line:** Network Liaison is seen as a forever job, something that you just can't get into lightly. This could be very good for ITS — departmental relationships.

3.2 Coordinating the Larger Process:

We have recognized that the well defined and documented network registration process is only part of a much larger process that includes many parts of the Division (see Figure). While we have done some work to lay out an overview of that process, there is clearly no one in charge of the whole thing. Indeed, for the most part, we rely on the customer to provide much of the coordination as the building or expansion of a departmental network proceeds. In a few recent cases (like the Library or Huron College) a special group is formed to help. While this may be appropriate for the big jobs or the quasi-external jobs it probably isn't for the regular run-of-the-mill connections. We need to establish an ongoing group of experienced generalists with the time available to handle this coordination.

4 Needed from Management

- Buy-in from all of ITS that the process of getting networks properly set up is a priority. It is one of the major things done by the department and we can't let it be done poorly.
- Develop and enforce consistent standards for what is charged and what is not across the Division. One suggestion is that we charge for everything, but that the customer doesn't always have to pay (directly). At least then it will be clear about who is doing what and for how much.
- Define clearly the responsibilities and accountabilities of each group within ITS so that it is well understood who does what and that there is only one group for each function. Figure might be useful as a guide to help us define roles and assigning responsibilities.
- Resources must be made available to allow us to obtain and train a reasonable number of Network Liaisons and this must be considered an important part of their jobs.
- Resources must be made available for more extensive Technical Contact training to push the network maintenance out to the field better so that the liaison job is smaller and easier. (Or tough policies that require ITS to manage a network under contract where we determine that there isn't an appropriate Technical Contact.)
- For efficiency, we must eliminate the Academic vs Administration distinction. It serves no useful purpose.
- We must move toward further documentation of our operating procedures perhaps through a *Standard Operating Procedures* document. It is time to define these and provide support for writing and once written, following such procedures across the Division. A *Standard Operating Procedure* document will help us to define
  - the pass off points between the various specialists,

- the responsible groups or people for each part and
- the services that are being provided and those that are not.

Such a document would be linked to the Division's *Facilities and Services*[8] document so that we advertise exactly what we do and build appropriate expectations for our customers.

5 In the meantime . . . What's Currently Underway

A number of initiatives have recently been 'spun off' from the Liaisons group (or at least have some continuing relationship to that group if only in a heavy cross over of people) to try to address or at least define some of the larger issues that we are facing. Many of these groups are forming from grassroots needs and really don't have a formal place to report. A clearer definition of organizational responsibility might help to solve many of these problems more easily. Indeed many of the problems being addressed below can be attributed to a very unfocused PC support policy over the last five years at ITS and UWO.

- We continue to work on establishing new networks on campus and to bring back the experiences and problems to the larger group for comment and sometimes formalization in terms of documentation. The ad hoc bookstore group was an example of a fairly formal version of this.
- There is a group looking into short term solutions to the common problems of running both so-called 'administration' and so-called 'academic' network suites on PCs using winsock as the common base.
- Another (heavily overlapping) group is looking at the larger question of ITS standards for installing software on PCs. (This one is clearly beyond the scope of the Liaisons, but it does impact on their work.)
- The joint group on Windows'95 had at least a part of its origins at a recent Network Liaison meeting (again well beyond the scope of the Liaisons group).
- A small group is also looking into writing some configuration recommendations for handling the security of 'public' PCs and 'public' labs of PCs.

```
       0
Client Considers
    Network

       1
  Consultation,
Analysis & Design
```

———————- Proceed?
Further steps begin ONLY after the client

[8] URL: http://www.uwo.ca/its/

decides to go ahead with the installation. This decision is usually made after all hardware, software and network design information and quotes have been reviewed and considered in consultation with ITS consultant(s). Once the decision is made to go ahead, certain tasks of all the following steps can begin. Activating these tasks now can ensure a timely and integrated install for the department.

2
Network Registration

3
Account Setup

4
Network Cabling Install

5
Hardware & Equipment Install

6
Workstation Configuration & Applications Install

7
Training & Support

Figure 1: Summary Overview of Network Install Process (From the Bookstore Study Group)