Desktop Computing Support: Do we need to be thinner?
Mark C. Sheehan, Montana State University-Bozeman

The group included 20-25 people. Discussion was centered around Windows Terminal Server technologies—Citrix Winframe as it is delivered with Microsoft Windows NT version 4.X Terminal Server Edition and the Citrix Metaframe add-on—with only very brief forays into Unix X-based thin client technologies and personal digital assistants such as Palm Pilots. We spent most of our time on the following issues:

Cost savings of thin client solutions. Our general impression was that Windows Terminal thin client rollouts do not result in hardware cost savings, even over the long term. They can, however, result in substantial reductions in support costs if implemented carefully. They are particularly suited to diverse, poorly controlled computing environments, such as home or dorm room PCs. They are of less value in centrally maintained, tightly controlled contexts such as student labs or office blocks.

Other benefits of Windows Terminals. Windows Terminal implementations can extend the life cycle of desktop applications by providing all users with the same version of an application. If the environment is uniform it is less susceptible to frequent, unnecessary, marketing-driven version upgrades. Windows Terminals facilitate remote access to applications, especially secured applications that may be accessed only from a limited range of network domains. Windows Terminals provide the only truly stable access to Windows applications for Mac and Unix workstation users. Applications delivered on Windows Terminal Servers provide the same performance to all users, regardless of the power of the desktop workstation; thus they level the playing field for users. (Note from one installation: Microsoft Internet Explorer seems not to be a Windows-Terminal friendly application. It consumes inordinate amounts of CPU resources.)

Questions and Answers.

- From where are files served in a Windows Terminal environment? I.e., where can users store their files other than locally?
  No one had an answer to this.

- What are Windows Terminal client license costs (Winframe and Metaframe)?
  Citrix provides a 40% discount to education accounts. Microsoft “key-server” licensing is useful in the Windows Terminal environment.
  Windows Terminal users must each have a Terminal Server license assigned to them for the duration of each session. They may need an NT client license, as well. No one seemed sure.

- What are the security concerns in Windows Terminal environments?
  Windows Terminal Server offers mild encryption.
  NT security on the server can help protect its C: drive.

- Why haven’t thin client solutions caught on more in higher ed?
  A rapid pace of change in this area has meant a decrease in standardization, making many thin client solutions insular and proprietary (and thus unattractive).
  Resistance to change has been a major factor. People expect to have a “full” PC on their desks.
  There are significant barriers to entry into the market. Terminal servers, for example, are expensive to purchase, maintain, and support. Terminal server technologies are necessarily more complex than either stand alone servers or PCs.

There is resistance to “returning” to the dumb terminal environment.