

To: ViterbiNet Users
Cc: A. Powell, C. Kyriakakis, A. Ortega, G. Halfacre, N. Phillips, A. Weber, S. Scafani
From: A.A. Sawchuk
Subject: Viterbi Research Network (ViterbiNet)
Date: August 12, 2005

History

For many years the Signal and Image Processing Institute (SIPI) and Integrated Media Systems Center (IMSC) has operated a research network for users in IMSC, SIPI, EE-Systems, and CS. It may support other VSOE activity in the future, so effective immediately we have renamed it the *Viterbi Research Network (ViterbiNet or VRN for short)*.

ViterbiNet is for research users and projects that require:

1. high bandwidth (at least 100 Mbps to each machine and Gigabit Ethernet to Internet2) for experiments in immersive technology, advanced networking, telepresence and high performance computing
2. flexibility in moving and reconfiguring machines and network service (unavailable any other way)
3. backups, server operation, help with software installation and maintenance

These and other ViterbiNet services are summarized and compared with the standard net connections of ISD in a table at the end and in another document *ViterbiNet Policies* (attached with this memo and available soon on the web). ISD charges monthly per-port for their lowest common denominator (and in fact, their only available) service. In recent years the service level of ISD has declined; thus this high-performance infrastructure is unavailable from them at any price. In most cases, 100 Mb Ethernet is not available in your location. Thus ViterbiNet supports the research of more than 35 faculty, and hundreds of graduate students and research staff in IMSC, SIPI, EE-Systems, and CS.

Costs and Funding

ViterbiNet operates with 1.3 full-time staff plus some costs for materials and supplies. The capital equipment and physical infrastructure of ViterbiNet has been paid for entirely from contract and grant funds, including servers, switches, special-purpose hardware and high data-rate wiring. These capital equipment investments have averaged over \$400K per year for the last several years and are not included in the operation costs.

In the past there have been three sources of funding for ViterbiNet:

1. IMSC direct support of a part of the staff salaries, materials and supplies (proportional to IMSC project use)

2. direct charges to non-IMSC contracts and grants (proportional to usage). Projects that use ViterbiNet pay *monthly* for this use at an established *support rate* which is a percentage of the sum of salaries, wages, fringe benefits, materials and supplies expenditures (travel, equipment, tuition remission and overhead is excluded) *actually expended for that month on one or more of the research project supporting accounts regardless of source* (government, industry, gift, USC, etc.).
3. VSOE payment of ISD network connection charges as our effective Internet service provider (ISP).

For FY 2005-2006, the total of the first two items above is the equivalent of \$140.2K yearly. The third item (ISD connection charge) is \$82.6K yearly (a discount that we negotiated from the published ISD rate of \$141.4K by operating, maintaining and supplying the capital equipment ourselves). Thus the total yearly cost of ViterbiNet is $\$140.2K + \$82.6K = \$222.8K$. The VSOE is committed to pay the \$82.6K connection charge directly in the future. Thus we must recover a total of \$140.2K yearly to pay for the operation costs.

New Uniform Billing Procedure for All Users

With the phase-out of the IMSC core NSF ERC funding over the next two years, we have decided that the easiest and fairest way to pay for ViterbiNet is for *all* users to pay a charge proportional to their monthly use using the same procedure outlined in item 2. above, starting July 1, 2005.

To help in the transition, IMSC has agreed to pay ViterbiNet charges directly for on-going IMSC projects for 2005-2006 instead of the previous support method of item 1. above. Non-IMSC users will continue to pay support charges as in the past.

All users must sign a **ViterbiNet Users Memorandum of Agreement** (attached; also available soon on the web) certifying their support commitment. Please complete and return this form to Gloria Halfacre (MC 2564, x04145) by Friday, August 17, 2005.

New Research Funding

Please notify Gloria Halfacre immediately of any new research contracts and grants that use ViterbiNet to complete an updated **Users Memorandum of Agreement**.

Future Proposals

All future research proposals from ViterbiNet users that make use of its facilities must contain a budget item for financial support calculated as described in item 1. above. This support generally appears as a line item in the materials and supplies categories of proposal budgets. Gloria Halfacre will supply the details of how to list ViterbiNet support.

Support Rate for 2005-2006

The \$140.2K operational costs are essentially fixed. In anticipation of increased usage, we have set the initial ViterbiNet support rate at 6%. In fact, for a typical research contract or grant, the ViterbiNet charges average about 3-4% of the total budget because overhead, travel and other charges are excluded from the calculation.

Gloria Halfacre is in charge of billing for ViterbiNet. Together with the Viterbi Engineering Financial Office, she has implemented a streamlined billing procedure.

This memo, **ViterbiNet Policies, ViterbiNet Users Memorandum of Agreement** and other documents will be available soon on the web.

What ViterbiNet Users Get	What Everyone Else Gets From ISD
<p>Gigabit Ethernet direct access to Internet2 Fast network services (minimum 100 Mb per second) Indefinite e-mail retention (up to the system storage limit) Backups of Macs, PCs, Suns, servers of faculty, staff and students as requested Server operation Software installation and maintenance of select packages Consulting, update installation, repair help Flexibility for research in moving machines, new installations (no charge for new lines or moving existing lines, response time in hours instead of weeks with ISD) Power conditioning hardware for hosted systems FAQs, documents and help on the web site</p>	<p>10 Mb per second standard network connection (100 Mb or 1 Gb unlikely to be available in your location) Six month e-mail retention No backups No server operation No software No maintenance Significant charges and delay for connecting any machine in a new location or installing any new ports Minimal help and lots of hassle Lowest common denominator of service Little or no documentation</p>