Infrastructure WP Progress Report
For the period of
Oct. – Dec. 2000

Issued by

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1.1 National Test Network

1.1.1 Requirements Definition

High level network diagrams have been produced which illustrate the proposed connectivity of the participating sites to CA*net 3. Six sites have been specified, they are: AESB, CSCV, OCDSB, NRC, KPRDSB, TDSB and EPSB. Each site requires as a minimum, 10 Mbps of bandwidth (full duplex). The ISABEL CSCW application has been selected for supporting interactive videoconferencing sessions. A high end PC (PIII ≥ 600 MHz) running Linux is needed to support the ISABEL application. A second PC also running Linux is required to act as a control display and to run the ISABEL Flow Server application at sites where multicast is not supported. Requirements for the PC platforms and A/V equipment have been specified.

1.1.2 Phase I – Limited Deployment with Basic PSTs

1.1.2.1 Scope Definition

Although the participating sites have been identified, connectivity to CA*net 3 is a major issue and prohibitive due to cost for CSCV and KPRDSB. Discussions have been initiated with service providers for local loops and access to CA*net 3 with the respective RAN. An interim satcom link has been proposed to CSCV to connect them to CRC. This proposal is currently being evaluated. Delays in the Ottawa Dark Fibre Build is creating problems for OCDSB and NRC which is now slated for completion in July ’01. An interim solution to connect OCDSB to CRC via Bell Nexxia’s ATM service was adopted in December. This will allow Rideau High School, Earl of March Secondary School and OCDSB to be bridged together over 10 Mbps ATM PVCs to a Bell CO located Catalyst Switch and their packets routed to CRC via a separate 10 Mbps ATM PVC. NRC is deploying a new network infrastructure for their Virtual Classroom and they are experiencing difficulties in getting their network connected to the Onet GigaPOP located on their campus in building M-60. They are currently exploring using the NCIT*net to access CA*net 3 via the CRC GigaPOP. Until a complete picture is available for all participating sites, it is impossible to generate a comprehensive network

diagram with details regarding: equipment configuration, IP addressing and routing scheme, and multicasting scheme.

1.1.2.2 Implementation & Test

Equipment and services have being acquired by AESB. They have fibre connecting their school to the Nfld. GigaPOP with a 100 Mbps link. Due to some administrative hurdle, the link has yet to be activated. Until this happens, participation to events is done from MUN. CSCV are still in negotiation with Vidéotron and RISQ for their connectivity. Until they get connected, they participate by going to CRC. OCDSB have received their PC and A/V equipment for their three locations. Until they get connected via the interim solution, they participate by going to CRC. KPRDSB are still in negotiation with Bell and Onet for their connectivity. Until they get connected, they participate either by going to TDSB or through a phone connection bridged into an ISABEL session at CRC. TDSB was late in signing their contract and have been requesting Bell to setup temporary 10 Mbps connections to the Onet Toronto GigaPOP to participate in events. They need to establish a permanent connection and acquire better equipment. EPSB has a 10 Mbps connection via Group Telecom to Netera. Their network will be upgraded to 100 Mbps with multicast support. They have acquired and installed the PC and A/V equipment. As sites received their equipment and connectivity to CA*net 3 is established, the systems will undergo integration and tests, and their network connection will be verified.

1.1.2.3 Performance Evaluation

Metrics need to be defined in consultation with other work packages. A meeting was attended with the External Evaluation Lead to define indicators. Technical evaluation forms were prepared and completed for the Oct. 30th event. Pathchar tests were conducted which identified bottlenecks of 4 Mbps for TDSB and 3.2 Mbps for EPSB. Also these tests revealed packet drops of 15% for TDSB and 32% for EPSB. Once all sites are up and operational, comprehensive tests will be performed.

1.2 Controlled Experimental Testbed (CET)

1.2.1 Requirements Definition

This task is on hold due to delays in the completion of the Ottawa Dark Fibre Build. A meeting will be setup with OCDSB and NRC to define their core network components. Where possible, the equipment will be specified with the ability to support advanced PSTs.

1.3 Operations & Maintenance

1.3.1 Technical Web Site

Technical information (configuration information, training material, ISABEL builds, presentation material, etc.) has been placed on a web server at CRC for use by the Infrastructure Team. Over time this information will be expanded and transferred to the Technical Web Site master operated by STEM~Net.

1.3.2 NOC

Bobby Ho is the main point of contact regarding the coordination of NTN operations, troubleshooting network problems and providing technical support.

1.3.3 Testing

Some preliminary performance measurements have been collected.

1.3.4 Training

Hands-on training sessions were conducted with technical leads during the October Retreat using the CRC component of the CET. As well, technical leads for CSCV and OCDSB used the CRC component of the CET to partake in a live training exercise during the LC Oct. 30th event. On-going training over the NTN is be provided during test campaigns for upcoming events.

1.3.5 Scheduled Events

Assistance was provided in the preparation, test campaign and running major events on Oct. 30th, Nov. 21st and Dec. 14th. Less structured sessions were also supported on Dec. 1 st and 7 th. We are now preparing for the next major event scheduled for Jan. 17th. Technical information was supplied to Finland in preparation for their participation in the LC program. Some time will be spent in verifying and testing connectivity to Finland once they have acquired the necessary equipment and services.

1.4 Reporting

1.4.1 Meetings

A Kick-Off meeting was held during the October Retreat held at CRC. A progress review meeting with the technical leads from the participating sites was held in November. The plan is to hold regular virtual meetings with all the technical leads using ISABEL once connectivity to CA*net 3 has been established by all participating sites.

1.4.2 Documentation

A progress report was issued to project management in November. The technical writer position is still open.

1.5 Project Management

I attended the weekly project meetings held on Tuesdays. These meetings will be held bi-weekly starting in January ’01.