CANARIE

CA*net 4

Intelligent Infrastructure Program

Quarterly Progress Report

NETWORKS > COLLABORATION > RESULTS > RÉSEAUX > COLLABORATION > RÉSULTATS

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CANARIE

Project Information

Lead Contractor:	McGill University			
Project Name:	Underwater Window		Project #:	IIP-03
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Participant 1:	University of Victoria			
Participant 2:	Flex-Met Technologies			
Date:	Oct. 20, 2006.			
Claim Period:	July 1, 2006	To:	September 30, 2006	

Impact Report

The five full time positions continued, three at McGill and two at the University of Victoria.

Project Activities

As foreseen in the Milestone 3 Report, the new model Panasonic camera was not delivered as scheduled in July, but rather in late September. This in turn delayed manufacture of the camera housing because it must be fitted exactly to the actual camera. The camera will be initially deployed near shore since deployment at the scientific site before the end of the project isn't possible due to non-availability of the required ship. There will be complete testing of the camera's functionality and that of the network, but scientific use will take place mainly after the end of the project.

Deliverables Milestone 4: September 30, 2006.

1. Web Services software alpha test and revisions completed.
   Complete.

2. Report on UCLPv2 software use plan.
   Complete. The UQAM UCLPv2 team has met with the McGill team and agreed to provide the assistance necessary to integrate UCLPv2 once the camera is deployed in the Saanich Inlet location and can be used by scientists.

3. Camera housing 50% completed.
   50% Complete.

4. Underwater pan/tilt completed.
   Complete.

Updated Project Plan

See "Project Activities" above for a detailed explanation of changes to the Project Plan. An updated Project Plan for Milestone 5 appears below.

Updated Milestone 5 – December 31, 2006.

5. Report on UCLPv2 software test for ease of use, etc.
6. Report on video quality, network performance, and accuracy and response time of camera control.
7. Camera housing completed and tested.
8. Camera assembly attached to VENUS node.
9. Data stream format for NEPTUNE integration specified.
10. Underwater camera assembly performance tests completed.
11. Any necessary modifications of camera assembly completed.
12. Demonstrations for sponsors and the press completed.
13. Final project report completed.

Technological Progress

The camera housing manufacturer, Insite Pacific in San Diego, completed detailed plans for both the housing and the related optics for the viewing port. Since to the best of our knowledge this is the first time that such a long zoom lens has been placed on an underwater camera, it is possible that the optics will not work properly and re-design will be required. We are proceeding on the basis that there will be no delays.

As discussed in the Milestone 3 Report, work on computer control of the underwater camera was hampered by a lack of information on the communications protocol and command set used by the camera control unit for the new camera. Panasonic Canada was finally able to obtain a complete manual on camera control from the camera factory in Japan. This enabled rapid progress on the camera control software although some aspects of the protocol were unexpected and have required considerable work to replicate.

Work continued on controlling the various devices, such as lights and the pan/tilt, using a shared interface. This has proved to be far more challenging than originally thought. The devices have different communications requirements so conversion of signals is necessary. Some of the

conversion devices have not worked out of the box, necessitating lengthy discussions with the manufacturers on proper configuration and repeated testing.

Communications

There were no communications activities during the period.

Web Site Information

Project web site: **http://www.canarie.mcgill.ca**