CA*net⁴

Intelligent Infrastructure Program

Quarterly Progress Report

CLAIM CHECK LIST - Please ensure the following sections and appendices are completed and accompany each claim:

TASKS	Completed and Attached	
Project Information Table	☐ Yes	☐ No
Impact Report	☐ Yes	☐ No
Project Activities	☐ Yes	☐ No
Updated Project Plan	☐ Yes	☐ No
Technological Progress	☐ Yes	☐ No
Updated Project Budget	☐ Yes	☐ No
Royalty Report	☐ Yes	☐ No
Intellectual Property	☐ Yes	☐ No
Commercialization activities	☐ Yes	☐ No
Communications	☐ Yes	☐ No
Web Site Information	☐ Yes	☐ No
Updated Financial Schedules	☐ Yes	☐ No
Invoices for Eligible Costs incurred and paid over $1000	☐ Yes	☐ No
Employee Timesheets (signed by employees and supervisor)	☐ Yes	☐ No
Communications Materials	☐ Yes	☐ No
Financial Claim Schedules	☐ Yes	☐ No

NETWORKS > COLLABORATION > RESULTS > RÉSEAUX > COLLABORATION > RÉSULTATS

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Project Information

Lead Contractor:	University of Victoria		
Project Name:	TSOA	Project #:	IIP-19
Contact name:	Benoît Pirenne	Tel #:	+1 (250) 472 5353
Mailing address:	TEF Building Room #155, 2300 McKenzie Ave., Victoria, BC V8W 2Y2		
Participant 1:	IBM Canada Ltd.		
Participant 2:			
Date:	July 15, 2006		
Claim Period:	April 2006	To:	June 2006

Impact Report

a) **Economic Results –** Two new java programmer were selected, hired and started to work early May.

b) **Social Benefits –** Staff in the team have continued to learn about the new methods and technologies that we are deploying in the context of the project.

c) **Innovation –** We were invited to participate in the definition of the high level architecture of the cyber-infrastructure that US is planning in support of its upcoming ocean observatories.

d) **Please describe how the collaboration advances the development undertaken**
The CIIP project, as supported by CANARIE, allows us to explore novel ways to architect our data management and archiving system: the application of web services and enterprise service bus to transport data in a publish and subscribe mode would probably not have been considered at this stage of the process without the impetus provided by CANARIE.

Project Activities

APRIL 2006

1. The new extended data model was finalized.

2. A set of web services was created to control and read the configuration of the junction boxes
3. The Quartz Java based scheduler was put in place to take care of all batch processes

MAY 2006
1. Two new Java programmers were hired
2. The database conversion was prepared, miscellaneous issues were resolved
3. A first set of web services to access metadata as well as data was developed and released for internal use
4. Two staff went to the Java One conference and the entire team was briefed about new technologies
5. Meeting with IBM regarding DMAS needs and to plan for the coming months, in particular regarding the planning, training and installation of the messaging system for the the DMAS system team took place.

JUNE 2006

1. The team prepared Preliminary Design Review documentation and presented it to a committee of experts. The selected technological orientation of our project (including Service Oriented Architecture and Enterprise Service Bus) was presented and its relevance, impact and risks to the project was explained
2. Design and partial coding of the authentication and authorization process.
3. New web services engine Axis 2.0 was evaluated and replacement of current engine is scheduled for August
4. A cache strategy for metadata was developed and corresponding design and coding was started
5. A first set of Web pages to test upcoming web services was designed and coding was started. These Web pages will also be added to the current web site.
6. Conceptualization work on this project continued in earnest. Extensive consultations with US colleagues from the LOOKING and ORION cyber-infrastructure projects. In particular, documents under production include:
    1. a glossary of terms
    2. operational activity model
    3. requirements
    4. Those documents were published in June and have been attached to this report.

Updated Project Plan

With the recruitment process completed, the various tools and and supporting infrastructure further enhanced, the new data model finalized and released to integration and a few Web services prototypes in place, we are ready to start delivering the actual work products as planned. Thanks to the IBM support and aided by the recommendations of the PDR we went through, we now can approach the last 6 months of the project with reasonable optimism.

In the coming period, we are expecting our first "exposed", "production" web services to be put in place. In particular they will offer a vista on the VENUS observatory that goes beyond the simple web access. Similarly, internally, web services will allow instrument drivers to find their configuration and the message bus should have been installed and a few tests will have taken place, demonstrating the adequacy of the technology for our purposes.

Table 1: Updated Project Plan

Phase, tasks and subtasks	Scheduled Finish	Estimated Cost
TSOA	5-Jan-07	978400
Assessment and Planning	15-Sep-06	244480
Project start	3-Oct-05	0
Finalize TSAO plans	18-Oct-05	13440
Project Mngt Plan, start staff	3-Nov-05	11520
Risk assessment	11-Nov-05	5760
Analyze existing environment	3-Feb-06	79200
Negotiate use of GridX1 resources for V/N	3-Feb-06	57600
Identify applicable grid technologies	9-Dec-05	14400
Other environment	23-Dec-05	7200
Change management (external communication)	3-Oct-05	960
Define research solution (internal communication)	28-Feb-06	16320
Usability & acceptance definition, test plan	13-Mar-06	8640
Adapt TSOA/DMAS architecture	30-Jan-06	11520
Document existing env & stds	24-Feb-06	13680
Architectural design	5-Apr-06	20160
Implementation plan	1-May-06	12960
Monitor/end of phase	2-May-06	0
Project web site prepared	15-Sep-06	21520
content preparation	17-Oct-05	9600
integration in environment	31-Oct-05	5600
set up and release	1-Nov-05	720
web site maintenance	15-Sep-06	5600
Project manager/SOA specialist hired	12/12/05	28800
Solution Design, Build and Test	31-Dec-08	733920
Initiate Phase	2-May-06	0
Detailed Organizational requirements	4. May. 2006	2880
Change management (ext. comm.)	5. May. 2006	960
Test plan ready	11. May. 2006	3600
Working environment ready	12. Oct. 2005	0
grid specialist hired	28. Feb. 2005	19200

Phase, tasks and subtasks	Scheduled Finish	Estimated Cost
Workflow specialist hired	28. Feb. 2005	19200
Web services programmers hired	25. Nov. 2005	38400
Staff training on Web Sphere technology	19. Jan. 2005	7200
Use cases revised	18. May. 2006	8800
Use cases revised (Workflow)	3. Mar. 2006	2400
Use cases revised (Ins access)	3. Mar. 2006	2800
Use cases revised (event feed)	18. May. 2006	3600
Analysis	26. May. 2006	19520
workflow and Grid applications	31. Mar. 2006	9600
ins access	17. Mar. 2006	5600
event feed	23. May. 2006	2160
review	26. May. 2006	2160
Programming Cycle	22. Dec. 2006	457600
Workflow and grid applications	8. Dec. 2006	144000
Develop required WS for grid work	26. May. 2006	28800
KEPLER primitives development	26. May. 2006	19200
Grid-enable two data analysis applications	17. Mar. 2006	28800
Integration of UCLP technology	18. Aug. 2006	28800
Maintenance and expansion of KEPLER primitives	8. Dec. 2006	38400
Instrument Access Development	22. Dec. 2006	188800
Develop instrument 1 WS with input from other projects	1. Sep. 2006	67200
Develop instrument 2 WS	10. Nov. 2006	57600
Instrument 1 access WS maintained and expanded	22. Dec. 2006	44800
Instrument 2 access WS maintenance	15. Dec. 2006	19200
Event Feed	8. Dec. 2006	124800
Develop Event detection/reaction capability	10. Nov. 2006	28800
Develop archive access (query & retrieval) WS	18. Aug. 2006	57600
Archive access WS maintained and extended	8. Dec. 2006	38400
User Support Material	22. Dec. 2006	20000
Review and adapt Kepler doc	9. Jun. 2006	4800
Produce event detection manual	24. Nov. 2006	4800
Produce instrument access manual	22. Dec. 2006	5600
Produce archive access manual	22. Dec. 2006	4800
Integration and System tests	22. Sep. 2006	10800
Prepare Integration environment	8. Nov. 2005	0
Integration tests performed	22. Sep. 2006	10800
System reviewed with LOOKING	2. May. 2006	0
Joint Review with LOOKING	8. Dec. 2006	0
Monitoring	11. Dec. 2006	115200
Final Report	24. Dec. 2006	9600

Table 1: WBS table showing the phases, tasks and subtasks identified in the framework of this project. The structure is based on, and adapted from, IBM's standard engagement model as described earlier. The costs indicated only represent a rough estimate of the direct manpower expenses incurred and do not include all of the overheads. Please refer to the financial schedules in the appendix for a precise account of the costs. Completed tasks are marked in highlighter colour where yellow denotes a completed activity and pink an on-going one. A line left in its original state denotes a task not yet started.

Technological Progress

The tools we are using for setting up our infrastructure rest on the Java suite consisting of Eclipse as a development environment, Hibernate as a database access interface, cruise control as a test and build platform, subversion for version control. The Enterprise Service Bus we are considering is IBM's WebSphere MQ.

The implementation plan is still following the original one as suggested in the Statement of Work.The use of UCLP, as was indicated in our project plan, still is planned towards the very end of our implementation, when the time will come to transport heavy data loads to grid computing environments.

Please discuss the utilization of CA*net 4

As explained above, CA*net 4 is not yet in use. We are still at the SAO set up stage.

Updated Project Budget

Category	Total Budget		Approved (by CANARIE)
Direct Labour	$	343,362.18	25.8%
Fringe Benefits	$	69,900.06	5.2%
Overhead	$	223,185.43	16.8%
Consultants and Subcontractors	$	457,400.00	34.3%
Direct Materials	$	20,000.00	1.5%
Travel and Training	$	51,000.00	3.8%
Audit Costs	$	16,000.00	1.2%
Other	$	31.44	0.0%
Special Purpose Equipment	$	160,000.00	12.0%
Residual Value of SPE	$	(8,500.00)	-0.6%
Total Project Costs	**$**	**1,332,379.11**	**100.0%**

Project Financial Contribution	$	186,094.78	14.0%
Project In-kind Contribution	$	147,000.00	11.0%
Requested CANARIE Contribution	$	999,284.34	75.0%
Total Project Financing	**$**	**1,332,379.11**	**100.0%**

Royalty Report and Annex "A"

Please refer to Annex "A" and Schedule 1 at the end of this template. Please update and sign both as appropriate.

Intellectual Property

This project was going to produce public domain software.

Commercialization Activities

Not applicable.

Communications

The VENUS web site release was supported. The event was supported by a press conference where the DMAS system was presented.

Web Site Information

http://arc1.neptune.uvic.ca/dmas/ciip/

Annex "A"

To the CA*net 4 Intelligent Infrastructure Program Project Agreement dated January 17, 2005, between CANARIE and ==xxx== (the "Agreement")

List of Intellectual Property

As of ==XX XXX==, 2005

PROJECT: IIP – ==xx==

==Insert project info==		
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CANARIE

Schedule 1 - Royalty Report

Intelligent Infrastructure Program

Project # IIP-XX

QUARTER ENDED	TOTAL REVENUE	ROYALTIES DUE (X%)
Q3 – September 30, 2005		
Q4 – December 31, 2005		
Q1 – March 31, 2006		
Q2 – June 30, 2006		
Total		

The CANARIE funded IIP Project (Insert project name here), during the reporting period of (insert reported quarter here) has generated (insert revenue here) revenue. As such, $XX.XX royalties are due for this period.

Authorized Signature   _____

                                      (INSERT NAME HERE)

Date: _____