

To the RTWG:

It has been months since we gathered in Ottawa for a very successful workshop. I would like to bring you up to date on what has been accomplished since that time and share with you the desire to move forward and implement the prototype real-time data distribution system based on the design presented during the workshop. This will require the involvement of all members of the working group.

I would like to acknowledge the contributions thus far from JPL, NGS and AUSLIG as well as the continuing dialogue with GFZ. We now need to expand the involvement of member agencies that have expressed their desire to become involved in real-time activities of the IGS.

What follows is based on current accomplishments and nothing being said prevents any member agency from developing and/or contributing their own software providing it integrates with the prototype data distribution design. I assume that most of you will agree that the prototype model for data distribution should be a predominantly homogenous technology infrastructure because of the implications this will have in the future in terms of management and sustainability.

We are in a position to implement the prototype for data distribution due to the following recent accomplishments:

1) The structure of the Record Header has been finalized for prototype development. It now reflects the consensus arrived at by members who attended the breakout session held during the workshop.

2) NRCan's Internet GPS Data Relay now has all of the necessary features found in the position paper. The relay is undergoing beta testing and will be available to interested members in the near future.

3) Open source SOC data compression software has been developed for Benchmark and Ashtech GPS Receivers. It is in beta testing. (The choice of compression algorithm is not final and needs further investigation. The prototype design does accommodate any GPS data format.)

4) One hertz data collection programs (Linux based) have been developed for Benchmark/TurboRogue and Ashtech -- in beta testing.

Items 2, 3 and 4 represent "enabling technologies", the necessary building blocks required to implement the prototype for data distribution.

5) An RT-IGS FAQ's will soon be available. These Q & A's are intended to clarify issues. For example: How do enabling technologies become linked from data source ---> data user?

The following is a list of activities we need members to become involved in. They are grouped into four categories and are listed in order of priority. A) Tracking network activities. B) Design Standards activities C) Data center activities. D) Analysis Center activities.. Several tasks have been identified and other tasks must be identified with your help.

A) Tracking network activities:

- Activity: Establish 1-hertz tracking stations and distribute data on the open internet using position paper design specifications together with the required enabling technologies.

- Task: Install the required hardware and software (Computer + GPS receiver + enabling technology). Provide the necessary internet connection and continued local support (Firewalls will be an issue).
- Task: Coordinate network expansion (chair). (Station ID's, Agency identification, Data type assignments etc.)
- Activity: Enhance enabling technology capabilities.
- Task: Continued development of software to collect data from receivers other than Ashtech and Benchmark/Turborogues. The software referred to in (4) above will be available as a starting point. Other software must be identified and placed in the pool.
- Activity: Develop NRT - network performance indicators. This refers to data/packet availability/flow metrics, not data quality metrics. If any one has any ideas or experience I would like to know.

B) Design standards activities:

- Activity: Develop rt-data quality policy.
- Task: Continued development of real-time standards for data gathering and distribution using experiences gained with the prototype. Topics in this category will be broad including formats, network topology, protocols etc.
- Task: Develop rt-integrity monitoring tools.

C) Data center activities:

- Activity: Data gathering / data dissemination.
- Task: Install the required hardware and software. (Computer + GPS receiver + enabling technology). Provide the necessary internet connection and local support.
- Activity: Develop rt-data policies for IGS data centers. (may be something for Carey's WG)

D) Analysis center activities: (minimum suggested involvement)

- Activity: Data gathering and data to rt-application integration
- Task: Install the required hardware and software. (Computer + GPS receiver + enabling technology). Provide the necessary internet connection and local support. (firewalls?)
- Task: Develop methods of data to application integration. This will permit application development when centers decide to take that step. (this will be unique to each AC)

These activities and tasks will have to be further developed and timelines added but I need your input before doing so. I need feedback from you on which activities you are interested in and the contributions you feel you can make. I will further develop this plan once that is completed.

I am therefore soliciting your help to put in place the prototype rt-network. If you are interested in contributing to one or more of these activities or if you think that there should be activities and/or tasks added or removed from the list please let me know. I would like to see the energy of the

group spent in establishing the required stations, developing new tools that we need and improving the tools that we now have. This way duplicate effort will be minimized and hopefully reliability and performance will be the reward, something we will all benefit from. There will be plenty of time for friendly competition on the product generation side ;-).

The web site will be further developed in the near future. I will keep you posted.

Best Regards,

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