

*Cooperative Program for Operational
Meteorology, Education and Training (COMET®)*

MEMORANDUM

DATE: 23 January 2003

TO: MeteoForum Participants
Jack Fellows

FROM: Tim Spangler

SUBJECT: Annual Report

The MeteoForum project has been active for about a year now and I thought it would be nice to summarize our accomplishments and review where we might go next. It is tempting to view things as having gone slowly but I think we need to be proud of what has occurred to date by people who are doing this in their spare time.

As Dave Fulker and I conceived of the program, we established three goals:

- Provide the RMTc with access to advanced data sets and software, and educational materials
- Assist RMTcs to assume a more prominent role in their host country and region
- Enable RMTcs to work more closely together on both basic education and continuing education

During the Orlando meeting, all of us decided on three areas of emphasis:

- Support basic education at RMTcs by providing additional real-time data and analysis software, and by providing more educational resources;

- Support Regional Continuing Education through access to a network of experts, access to multilingual educational resources, and through access to real-time data.
- Support RMTTC innovation such as societal and economic benefits of national weather services, hazard mitigation, and other innovative areas of emphasis.

Over the last three years, I have visited every RMTTC in Regions III and IV, and others have visited individual RMTTCs as well. Tom Yoksas and I visited Belem and Buenos Aires this past summer to complete the list. The common themes from all of the centers were:

- Internet access is, in most cases, inadequate
 - Access to real-time data is difficult and unreliable
 - Educational resources need to be more easily accessible and in multiple languages.
- Regional cooperation is not common
- It is difficult to provide regional continuing education

This first year of MeteoForum has been dedicated to two issues: Internet access and real-time data. Tom Yoksas has been especially active on these problems and has been working with closely with many of you. Some information on current status (very condensed - Tom has written an extensive summary):

- Belem: Tom and I visited Belem in July to work with Jose Ricardo Santos de Souza and other faculty on ways to receive and utilize real-time data. Tom installed the LDM software and began moving data to the university. Since that visit, he and Ricardo have worked on several new ideas, and Unidata has issued a new version of the LDM that is more robust for distant sites, thanks in part to the cooperation of the UFPA. In addition, the Universidad Federal do Rio de Janeiro (UFRJ) has agreed to establish a top level IDD relay node for Brazil and Argentina. McIDAS will be installed at UFRJ so that satellite sectors specific to Brazil and Argentina can be created in Rio and injected into what will be IDD-Brazil. We are very grateful to Ricardo and the university for their cooperation and assistance.

- Buenos Aires: Tom and I visited the Argentina Weather Service and the University of Buenos Aires also in July. We found that real-time data could flow but was being restricted by a very old 486 PC being used as a router. We are trying very hard to buy a router for the university and get it to them although the details of how to get it there are harder than anyone could imagine. Liz Lessard and others at COMET are working on it. It should arrive in the next few weeks. Moira Doyle of UBA will soon download the latest version of the LDM, the one enhanced through cooperation with UFPA, and data will be ready to flow when the new router is installed, hopefully by the end of February.

Tom believes that we need to provide training for both UFPA and UBA on how to utilize Unidata software for the analysis and display of meteorological data. This should be an action item if everyone agrees, and we can perhaps accomplish the training during a meeting this summer.

- Costa Rica: Tom has been working with Vilma Castro, Walter Fernandez, and Guy de Teramond on moving data into the university of Costa Rica. Vilma is working on improving Internet bandwidth and we are trying to help in several ways. Vilma has just contacted us about assisting her to apply for her own NOAA-port receiver from WMO VCP program. Unidata will assist Vilma by building a NOAAPORT data ingest system., a better option than an off-the-shelf system. One other potential is to convert a dish formerly used by the Physics Department to receive NOAAPORT. The cost is approximately \$6000 and we may do that if the grant application doesn't work. We haven't given up and we know that high-speed internet connections are close to her building. She does get data now but principally at night.
- Barbados: Tom and I have both worked with CIMH. Tom will be corresponding with Colin Depradine and Selvin Burton about the internet connectivity, which he has been researching. Good Internet access is available through the Cable and Wireless for perhaps \$475 per month. We would like to assist CIMH in acquiring ADSL if they can figure out how to sustain the cost long term, or we can work with them to apply for a NOAAPORT receiver as Costa Rica is doing. On another front, I have been working with the CIMH on the potential for a webcast on tropical waves. This has been delayed by the workload at CIMH. I stand ready to accelerate work on this when they are ready.\

Venezuela: We are not actively working with the Venezuela RMTc at this time. They are not active and conditions in the country and in the Air Force make their future cloudy.

There are a number of other activities that have come up in the course of the year. The first is a joint project with the Argentina Weather Service to translate more COMET modules into Spanish. The project is underway, funded principally by the National Weather Service. We are hoping to use the WMO to transfer funds to Argentina. Fernando and Miriam were in Boulder last summer for training, and we also gave them a nice jeep ride in the mountains.

The University of Puerto Rico, a Unidata site, has volunteered to share data and work closely with MeteoForum. Professor Amos Winter has volunteered to help distribute data to the Caribbean area.

UFPA has volunteered to work with CIMH on the development of the tropical waves webcast, and we are thinking of ways that distance learning materials might be translated into Portuguese, primarily to the benefit of Portuguese speaking countries in Africa.

The National Weather Service has provided funding to COMET to create and distribute an archive CD of all COMET web modules. This work will also create a web site where users can go to update the archive perhaps once per month. This archive CD will also be distributed to 53 countries in Africa.

The WMO has provided some support to RMTcs to participate in MeteoForum and continues to be very engaged in what we are doing.

Next Steps:

- Discuss interest in a meeting next summer
 - Work with Vilma Castro to get a NOAAPORT receiver application prepared.
 - Work with CIMH on their internet access issues, perhaps in conjunction with a trip to work on the tropical waves webcast
 - Work with CIMH on a tropical waves webcast
 - Acquire a router for UBA
- Develop a training program when needed for use of Unidata software.
Distribute archive CD of COMET website

Make plans for enhanced educational activities after data and software problems have been addressed.

It is very gratifying how this simple project we are working on together has caught the attention of many people worldwide. The WMO Executive Council Panel of Experts on Education and Training put the following in their report to the WMO and the Secretary General for inclusion in the council report:

"The Council welcomed the initiative supported by COMET and UCAR, USA, to launch a "MeteoForum" pilot project aiming at developing a virtual centre through which WMO RMTCs in RA III and RA IV could access data and training provided by WMO, Unidata, COMET, and universities, and share data with each other. It encouraged the Secretariat to explore the possibility of launching similar initiatives in other WMO regions."

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