

Linda V. Moodie, GEONETCast Implementation Group
George Jungbluth, NOAA
Gordon Bridge, EUMETSAT



GEONETCast

Delivering Environmental Data to Users Worldwide

Current Status and Upcoming Plans, 2009-10



GEONETCast

Delivering Environmental Data to Users Worldwide



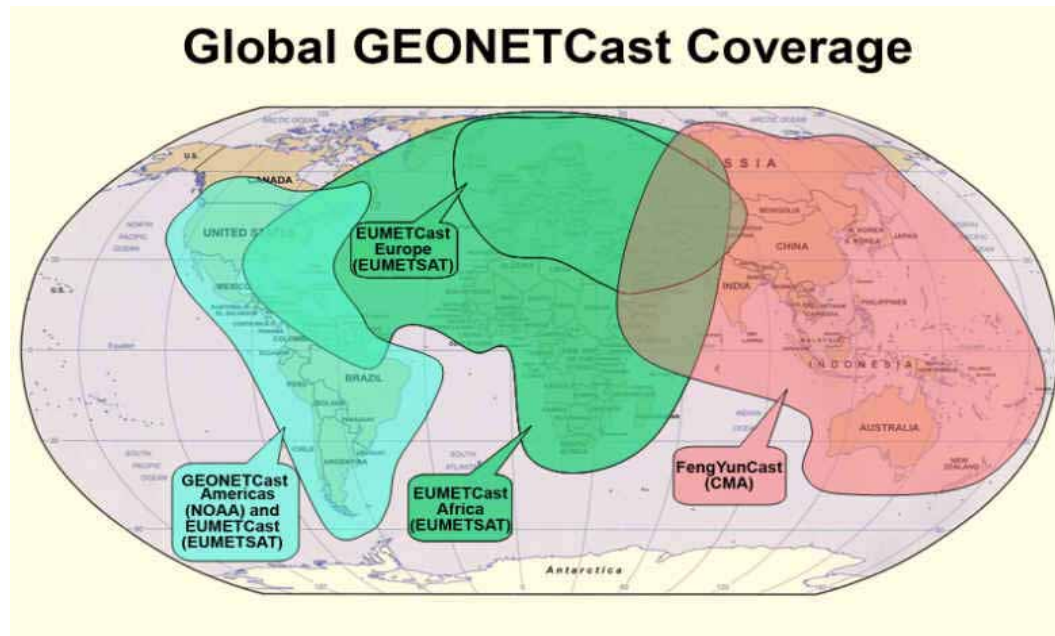
GEONETCast Overview

- Worldwide information dissemination system by which satellite and *in situ* data, products and services are transmitted to users through communications satellites.
- Receiving stations use low-cost, off the shelf technology.
- Information includes climate, weather, agriculture, air quality, disasters, and more, in support of GEOSS Societal Benefit Areas.
- No internet connection required.

GEONETCast Partners

GEONETCast is a system uniting regional data dissemination systems:

- **EUMETCast** (EUMETSAT): Europe, Africa, and parts of Americas
- **FengYunCast** (Chinese Meteorological Administration): Asia and parts of Pacific
- **GEONETCast Americas** (NOAA): North, Central and South America





2008 Achievements

- GEONETCast Americas went operational
- Expansion of user and provider base
 - Africa
 - RANET
 - SERVIR
 - CBERS
- Data and Metadata compliance with GEOSS
- Data Center links and regional re-broadcasts – EUMETCast and FengYunCast.



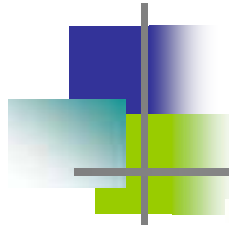
2009 Plans

- Regional Data Centers Interoperability enhanced
- Increased and more diverse user base in the Americas, Africa and Asia
 - Add government, educational institutions, general public to user base
- Carry out GEO Task actions
- Further develop Training Channel concept
- Hazard and Alert Channel development
- Product Navigator enhancements



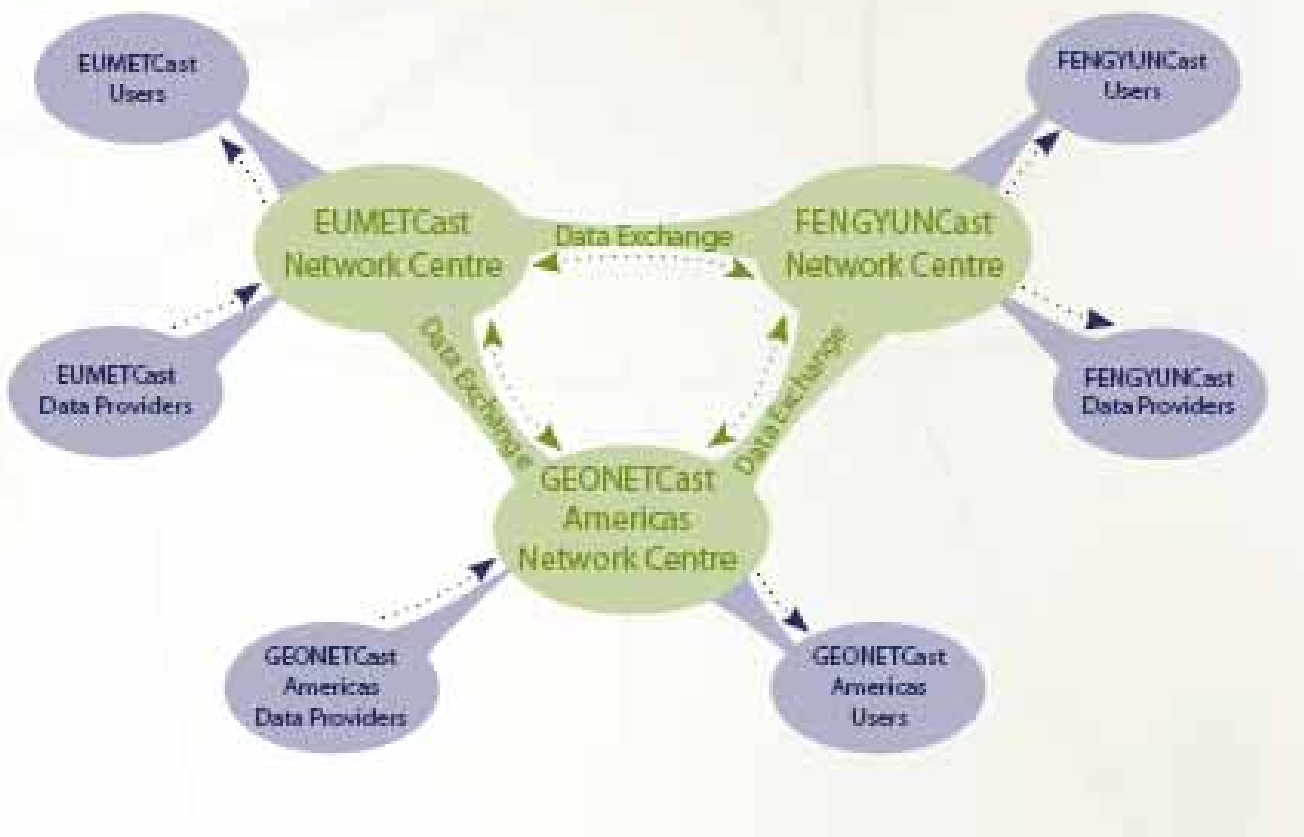
Interoperability

- Standardize technical interoperability mechanisms between EUMETCast, FengYunCast, GEONETCast Americas
- Continue discussions with Russian MITRA system.
- Establish data exchange agreements between regional centers.



GEONETCast Architecture

GEONETCast System Overview





Global Outreach

- User Engagement
 - Each region works directly with its Users;
 - In Europe there are currently about 2100 EUMETCast stations deployed;
 - In Africa, there are about 120 EUMETCast stations deployed;
 - In the Asia/Pacific region, there are about 200 FENGYUNCast stations deployed;
 - In the Americas there are about 50 stations deployed



User Engagement

- User base is growing, widening from traditional meteorological users to other groups – education, government.
- New capacity building and user engagement efforts will increase involvement of new user groups.
- Announcement of opportunity, outreach in previously-underserved regions: Africa, South/Central America, Asia.



GEO Tasks

- GEOSSE Dissemination and Distribution Networks
- GEONETCast Training (user engagement and capacity building)
- Establishing regional capacity building networks
- Building capacity for non-technical decision-makers in the use and impact of Earth observations



Training Channel

- Satellite broadcast “sub-channel” devoted to education and training materials
- Increase capacity of users to utilize GNC products
- Include COMET/Met-Ed, EUMETSAT, WMO offerings, courses, lectures, etc.
- Educational exchange and distance learning, university and school links.



Training Concept

- GEONETCast could support 2 types of training methods:
 - Delivery of training material in support of self-learning activities;
 - Targeted delivery of training material to be used during a training course.
- Relevant training material still in the process of being identified;
- Some course material providers have been identified– further potential training material providers are invited to get in contact.



Training Delivery (1)

- The Training Channel is planned to be supported by each GNC operator (CMA, EUMETSAT, NOAA);
- Will involve a specific setup of the dissemination systems and data exchange links;
- Could evolve to the continuous distribution of a Training Library.



Training Delivery (2)

- For self-learning, training material could be openly available to the GEONETCast User community;
- For targeted course delivery, the training material would be delivered to the target audience prior to course delivery;
- Training material would be received on a GEONETCast station, then accessed via LAN or USB disks or memory sticks, for example.



Training Channel demos

- 4 demos of the Training Channel were successfully carried out late 2008:
- EUMETSAT African User Forum in Ghana (self-learning);
 - AARSE in Ghana (self-learning);
 - Regional Meteorological Training Course in Niger (targeted training).
- NOAA broadcast of COMET training resources to:
 - the Americas (self-learning)
 - EUMETSAT for broadcast to Africa (inter-regional transmission demo).



Hazard Alert Channel

- Broadcast weather and environmental event alerts
- Alerts using Common Alerts Protocol (CAP) standards



Product Navigator

- File-based, fully-interactive and searchable guide to GEONETCast global data offerings.
- GEOS-compliant, linkable to other data sets and projects
- Offerings organized by GEO Societal Benefit Areas, provider, region, training resource, etc.
- Available online and over GEONETCast satellite broadcast



Open Issues and Remarks

- The GNC capability is proven but.....
 - What training resources could be exchanged.....
 - How to organise this exchange with minimum human intervention.....
- A White Paper on how the operation of the GNC training channel might be implemented is being developed.