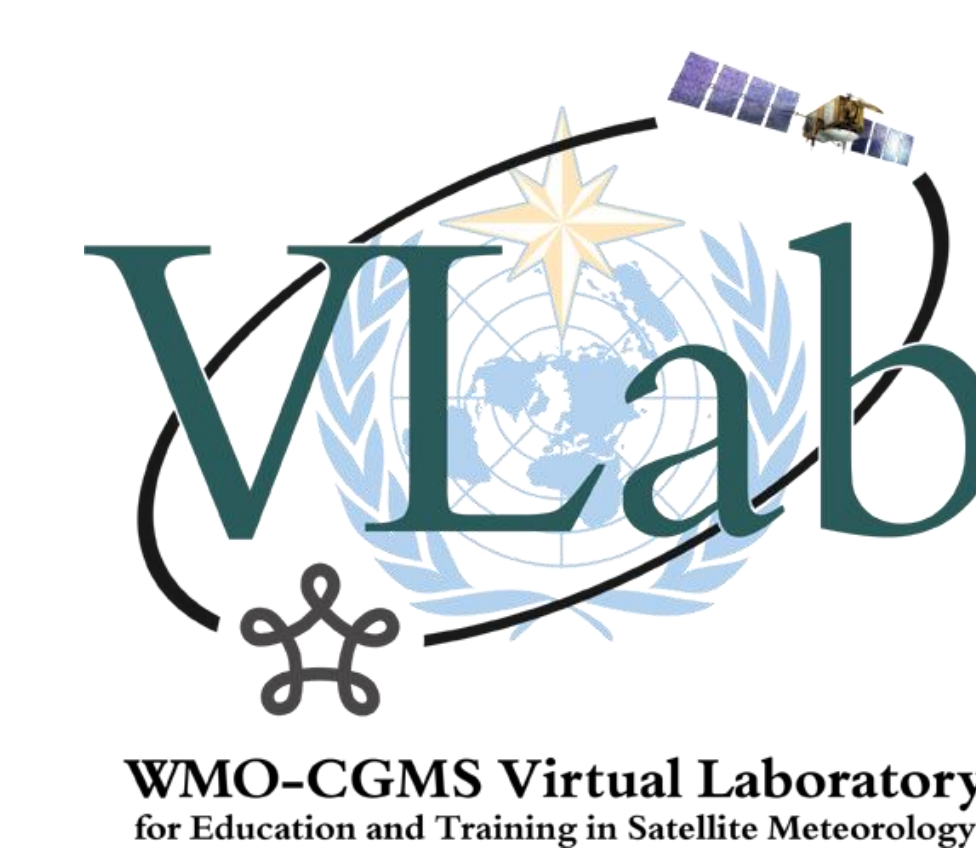




New Forecaster Training Paradigm for GOES-R?

Bernadette Connell, CIRA¹ and Luciane Veeck, WMO-CGMS Vlab² / CIRA¹



What is a training paradigm?

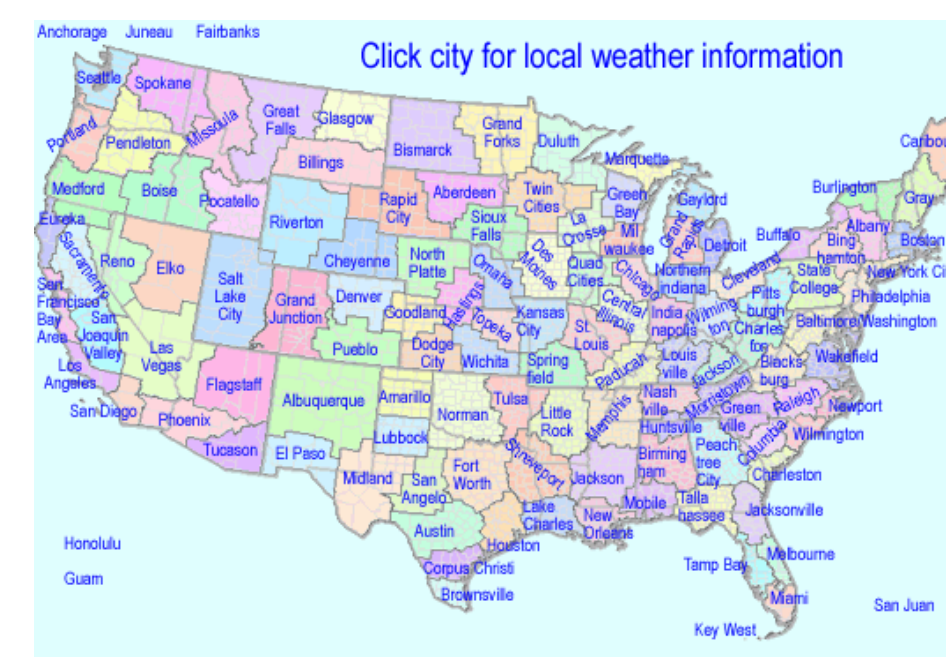
An accepted means to develop and deliver training.

Over the past 15 years, training for satellite matters for forecasters has been used to supplement gaps in education and as a means to present new and improved operational products. How has it evolved?

Training Audience:

USA: National Weather Service

One language, one government, relatively easy to collaborate with neighboring offices



International: Partner with WMO Regional Training Centers of Excellence in Costa Rica, Barbados, Argentina, and Brazil

Comprised of more than 30 different countries of varying sizes, with 3 primary languages. These 2 factors can hinder communication between contiguous countries.



Face to Face Training: 2-week events

Topics:

- Radiative Transfer
- Satellites: Status, Orbits, and Products
- GOES Imager Channels and Products
- GOES Sounder and Products
- POES Sensors and Products
- Satellite derived winds

- Applications: Water Vapor interpretation, Volcanic Ash Detection, Fire Detection, Precipitation Estimation, Severe Weather, Tropical, and more.

- Pros: Good learning environment away from the office
- Cons: **Costly**



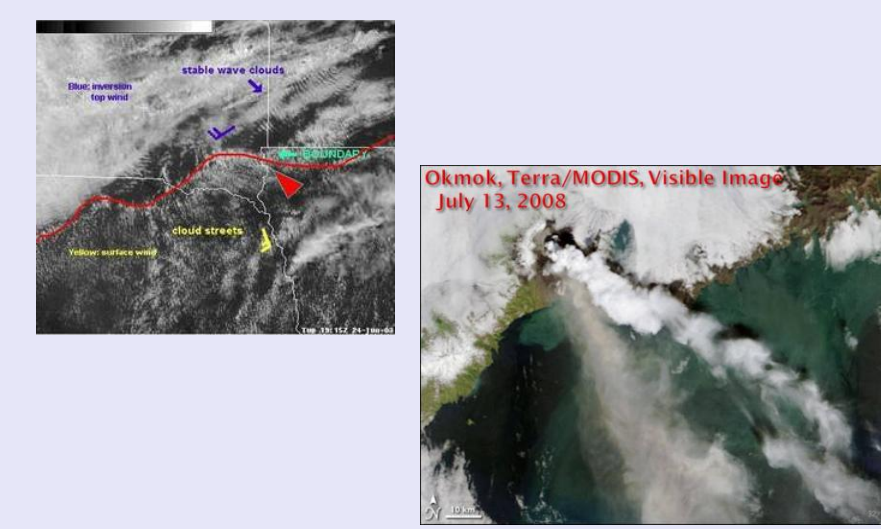
Virtual Training

Contains topics listed above + more

Ideal: Blended – Face to Face + Virtual

Lecture based

VISIT
Virtual Institute for
Satellite Integrated Training



USA: National Weather Service

Teletraining and online modules through the VISIT and SHyMet Programs

VISIT Focus: Single topics

VISIT Topics:

- Satellite Meteorology
- Severe Weather
- Winter Weather
- Tropical
- Lightning
- Climate
- Numerical Weather Prediction
- Fire Weather
- Other

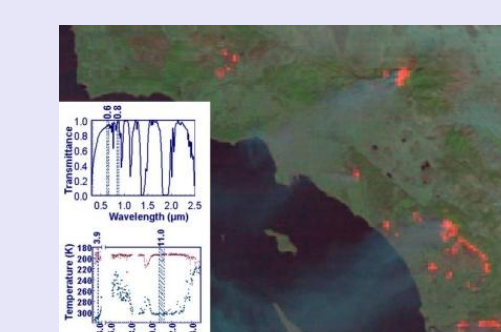
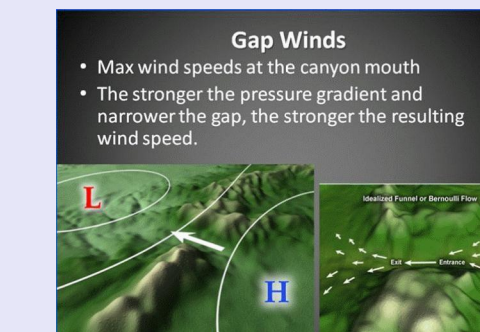
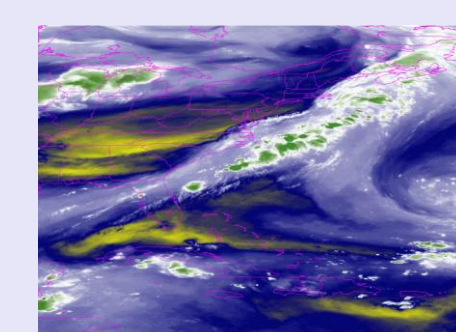
<http://rammb.cira.colostate.edu/training/visit/>

SHyMet Focus: Courses

SHyMet Courses:

- Tropical SHyMet
- SHyMet for Forecasters
- SHyMet for Interns

<http://rammb.cira.colostate.edu/training/shymet/>



GOES Satellite Imagery

Relatively consistent over the last 15 years
With persistent viewing, develop “intuitive” knowledge over time.

The expert in the office.

What does it take to be an expert?

Practice: 10,000 hours

3.5 hours/day * 365 days/year

~ 10 years

How many satellite experts do we have out there?

Are we taking advantage of their mentoring capabilities?

Progression of understanding

Aware

Knowledgeable

Capable

Skilled

Mastery

Expert

- In the US, with a Bachelor degree, a new intern to the NWS has knowledgeable or better understanding.

- In other countries, knowledgeable or better is possible, but an intern may be starting at the aware level.



Acknowledgments

This work is supported by NOAA Grant NA090AR4320074.

We are grateful to all contributors to the training events, online sessions and modules. (They would take an entire poster to list!)

International

Discussion based

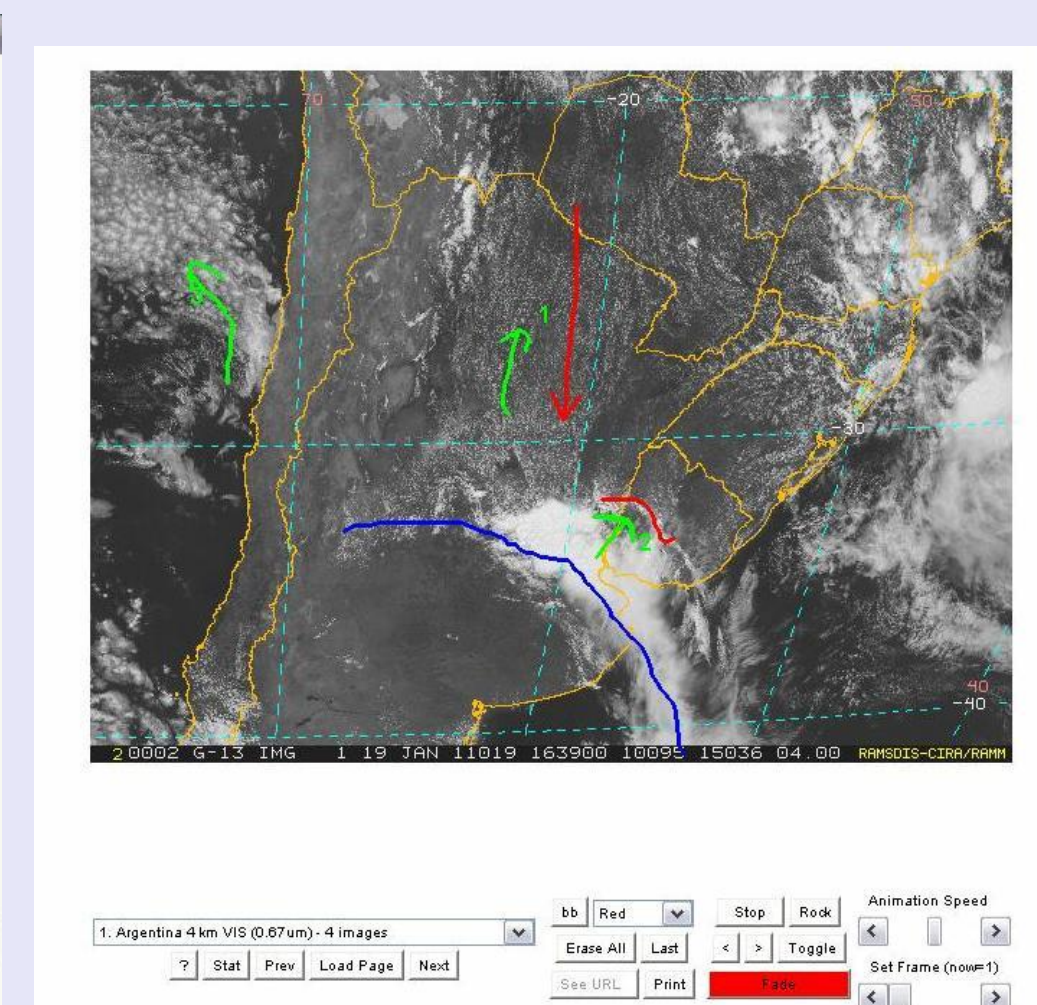
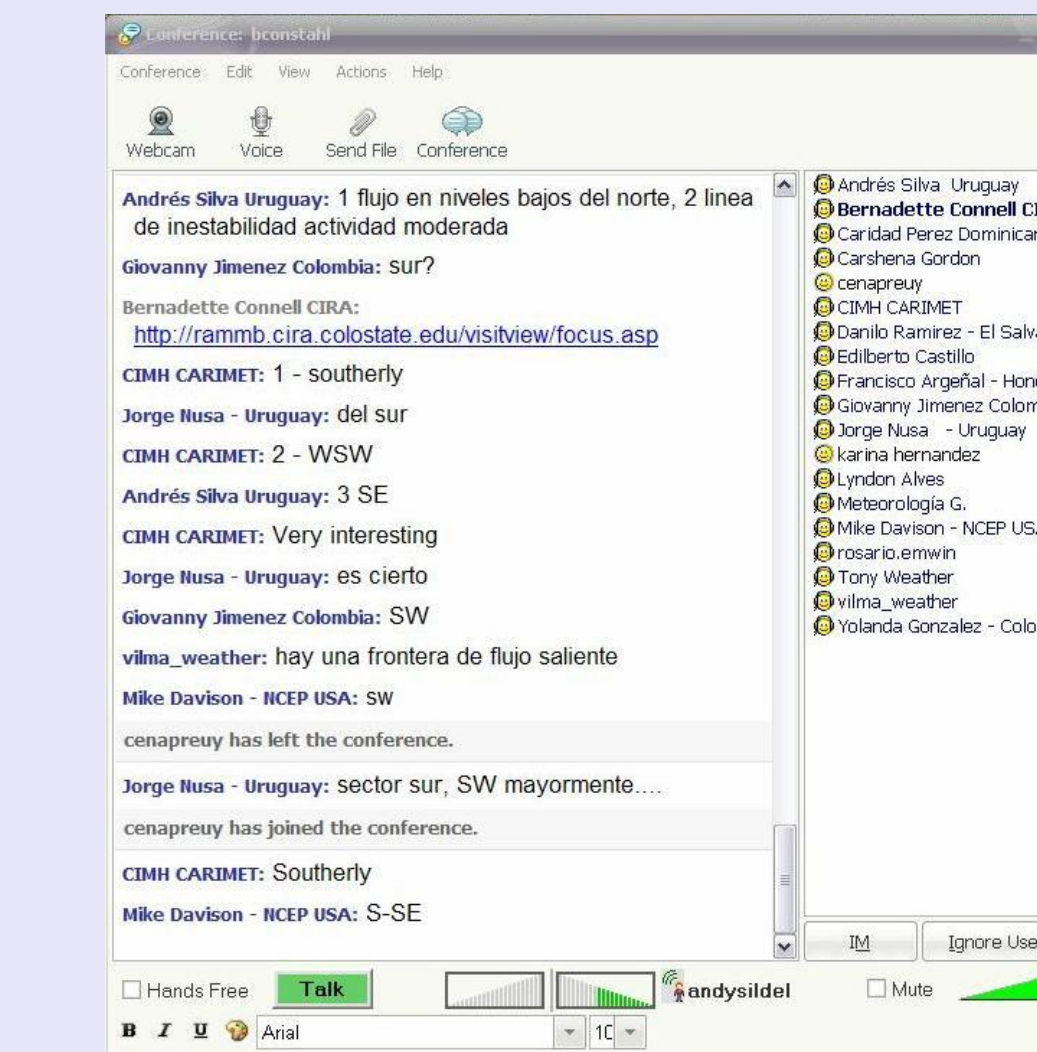
WMO Regional Focus Group of the Americas and the Caribbean

Organizers: CIRA, US NWS Training Branch, CIMSS, the International Desk at NCEP, RTC in Costa Rica and Barbados

Participants: Antigua, Argentina, Bahamas, Barbados, Belize, Bolivia, Brazil, Cayman, Chile, Colombia, Costa Rica, Cuba, Dominica, Dominican Republic, Ecuador, El Salvador, Guatemala, Guyana, Haiti, Honduras, Jamaica, Martinique, Mexico, Netherland Antilles, Nicaragua, Panamá, Paraguay, Peru, Trinidad, Uruguay, and Venezuela.

KEYS TO SUCCESS

- Motivation
- Distribute the workload
- Cooperation and Collaboration
- Input – experts and users
- Native Language
- Build capacity



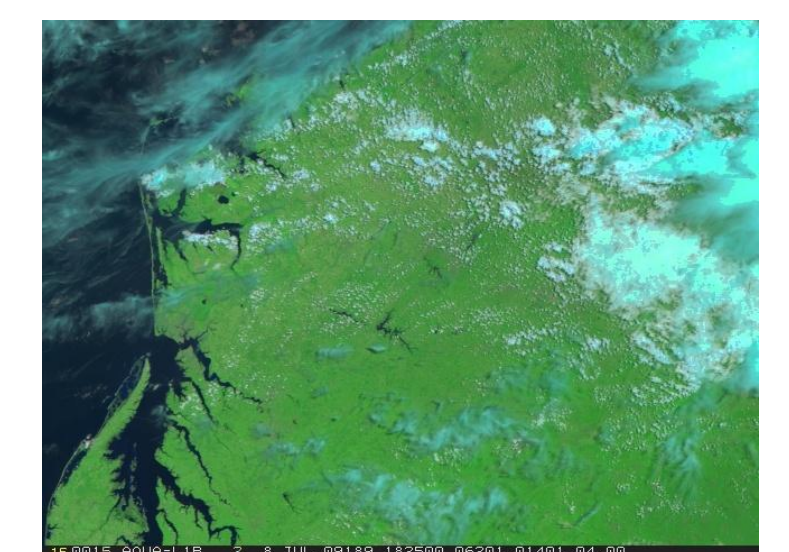
largest session: 40
users logged into
VISITview,
30 users logged into
Yahoo Messenger

<http://rammb.cira.colostate.edu/training/rmtc/focusgroup.asp>

Language considerations

Native – It is more meaningful when you can understand what is being said or shown.

Research to operations – Ditto the above statement. Are the two working with the same measuring units or visualizing the data from the same perspectives?



Where is this?

What imagery/tool is needed for training?

Depends on what needs to be seen.

Some tools are “ageless”



New Forecaster Training Paradigm?
Depends on your perspective.

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