User readiness plan for MTG-I satellite within the EUMeTrain project

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OUTLINE:

- Reasoning
- Users
- User needs
- Targeted Learning Outcomes
- Risks and constraints
- Learning solutions
- Learning resources
- Evaluation and assessment

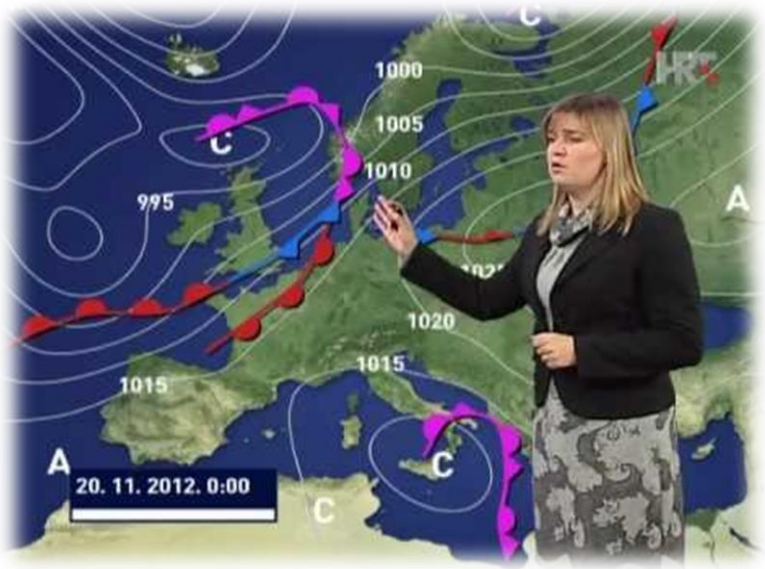
REASONING

"The mission of the Meteosat Third Generation (MTG) System is to provide continuous high **spatial**, **spectral** and **temporal** resolution observations and **geophysical parameters** of the Earth / Atmopshere System derived from direct measurements of its emitted and reflected radiation using *satellite* based sensors from the geo-stationary orbit. "

USERS

- Primary users are general, marine and aviation **weather forecasters, & others**

TV presenter



USERS

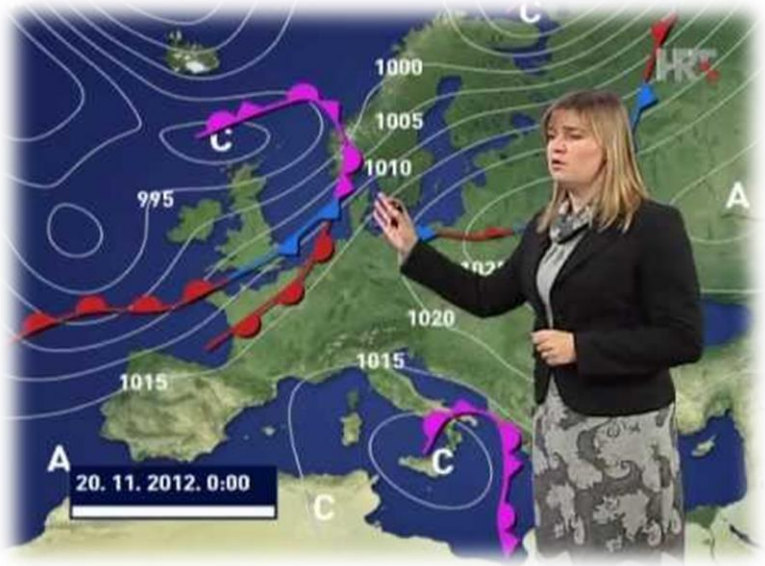
- Primary users are general, marine and aviation **weather forecasters**, & others

TV presenter

Forecaster

Trainer

Scientist



Professor

Head of FO

Colleague

...

TARGETED LEARNING OUTCOMES

- based on the document "Meteorological Satellite Enabling Skills and Knowledge"

> for **FCI** domain:

1. Identify surface features
2. Identify cloud types and their characteristics
3. Identify and interpret broadscale, synoptic and mesoscale systems
4. Identify and interpret atmospheric phenomena
5. Interpret derived fields and derived products
6. Identify and interpret oceanic features and systems

TARGETED LEARNING OUTCOMES

- based on the document "Meteorological Satellite Enabling Skills and Knowledge"

> for **LI** domain:

1. Associate the lightning events with observed atmospheric systems
2. Indentify the type of associated (mesoscale) system
3. Identify the regions of intense convective activity
4. Define the dynamics of the convective systems (intensification, speed and a direction of advection)
5. Learn to merge lightning data with satellite and NWP data for the purpose of nowcasting of severe weather
6. Identify the possible lightning threats (power networks, fires, telecommunication networks, human life, etc.)

LEARNING SOLUTIONS

- well known:

- Standard classroom, i.e. 'face to face' courses
- Online synchronous courses
- Online asynchronous course
- 'Blended' courses (classroom course with the online synchronous or asynchronous course as a precursor)
- 'Event weeks' (thematic week with the series of informative online lectures)
- Workshops
- Monthly Weather Briefings
- CAL modules
- Online Manual of Synoptic Satellite Meteorology
- MTG-I subset of the Colour Interpretation Guide

LEARNING SOLUTIONS

- well known:

- Testbeds for the new products (preferably online)
- User forum that would keep the communication lines open between users and trainers or developers
- Simulators
- Crowd sourcing of the satellite data experience MOOCs
- Closed APP that would contain all the relevant info and data from the MTG (something like a simulated real time MTG experience)?

LEARNING RESOURCES

- human resources:
  Internal and external trainers/SMEs

- content resources:

- Case studies based on available proxy data
- Training modules
- Product tutorials
- Colour interpretation guide
- MTG-I interpretation guide (channels + RGBs + products)

EVALUATION AND ASSESSMENT

"Based on the instruments from the second generation of Meteosat satellites, EUMeTrain project has gathered a great experience on the user needs. A valid extrapolation of these needs to a new capabilities of the third generation of Meteosat satellites could be a valuable proxy for the learning needs in the period after satellite launch."

DISCUSSION

- ways/means of collaboration (facilitating, lecturing, learning modules, conceptual models, products, cases, news, etc.)
- establish a formal collaboration on MTG-I training - official Memorandum of Cooperation or similar?
- ...