

# Domain Engineering for Weather Information Services

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# Objectives

## Main Objective

To improve user experience in accessing and receiving of personalized, timely weather information to enhance decision making

## Specific Objectives

- Analyze the weather dissemination domain to identify specific information needs for stakeholders - domain analysis
- Define a Domain Specific Language (DSL) for the weather domain to support development of weather information dissemination products - domain design



# Domain Analysis

- Engage UNMA - atmost 5 identified personnel for guided questionnaires
- Publication for domain model
- Refine initial Architecture with details from exploration - **pending**



# Analysis Objective

- Domain exploration paper submitted
- Thematic analysis: long table approach, group by question grid to deduce general model concepts
- Summarized report to present to UNMA for engagement to elicit requirements for dissemination system
- Use the guided questionnaires



# Domain Model Publication

- Target
  - Software and Systems Modeling Journal  
<http://link.springer.com/journal/10270>
  - International Journal of Software Engineering and Knowledge Engineering  
<http://www.worldscientific.com/toc/ijseke/27/01>
  - International Conference in Software Engineering Research and Innovation  
<http://redmis2016.com.mx/conisoft2017/>
    - Paper submission 19th May
    - Notification July 14th
- Includes vocabulary of weather information dissemination domain concepts, relationships and operations between entities



# Domain Design

Some concepts specified as Magnolia concepts

- package WeatherServices
  - concept WeatherForecast (type, updated, interpreted)
  - concept WeatherProducts (type, region, stakeholder)
  - concept AgriculturalWeatherProducts (use WeatherForecast, type WeatherProduct, type region, type Stakeholder, type Season, type AgriculturalKnowledge)
  - concept WeatherDissemination (type WeatherProduct, type language, type area, procedures(sendSMSWarning, sendRadioWarning, distributeCDForecast))



# Next Steps

- Engage UNMA - atmost 5 identified personnel for guided questionnaires
- Publication for domain model
- Refine initial Architecture with details from exploration



Thank you! Comments, suggestions, questions, reactions?

