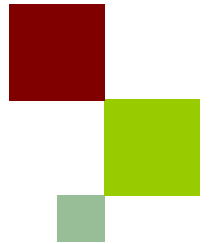


Introduction



Sar Technical Training for Forest Mapping - 2014/2015

Cédric Lardeux cedric.lardeux@onfinternational.com

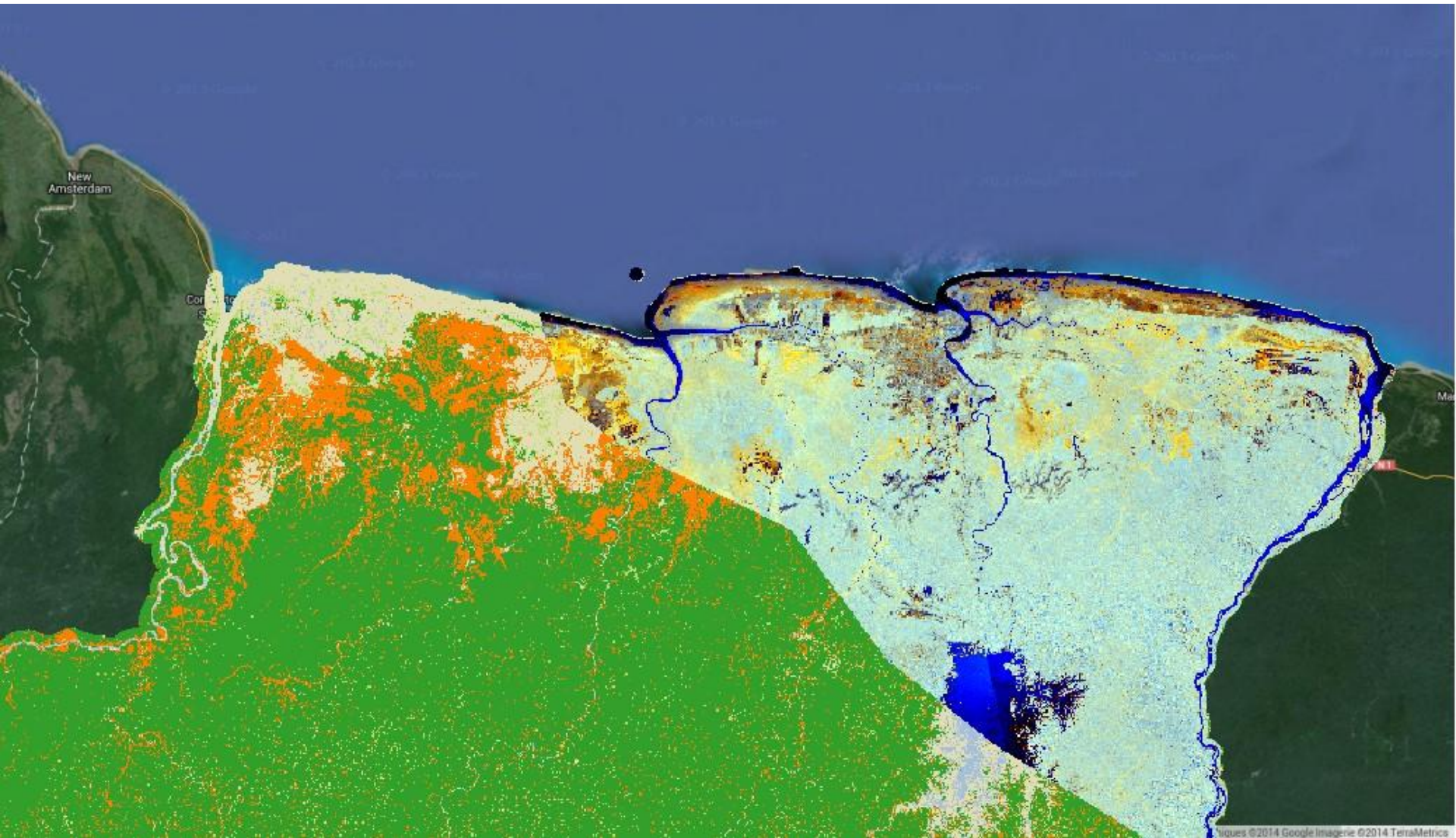
Jean-Paul Rudant rudant@univ-mlv.fr

Pierre-Louis Frison frison@univ-mlv.fr



ONF International

RADAR MAPPING EXAMPLE



OUTLINE



- I. **The Team**
- II. **Objectives**
- III. **Processing Overview**
- IV. **RADAR Training Kit**
- V. **Planning**





- **Jean-Paul Rudant**
University Paris Est Merne La Vallée (UPEMLV)
RADAR Expert
- **Pierre-Louis Frison**
University Paris Est Merne La Vallée (UPEMLV)
RADAR Expert
- **Cedric Lardeux**
ONF International
Geomatician expert (RADAR, Optical, GIS, Open Source)



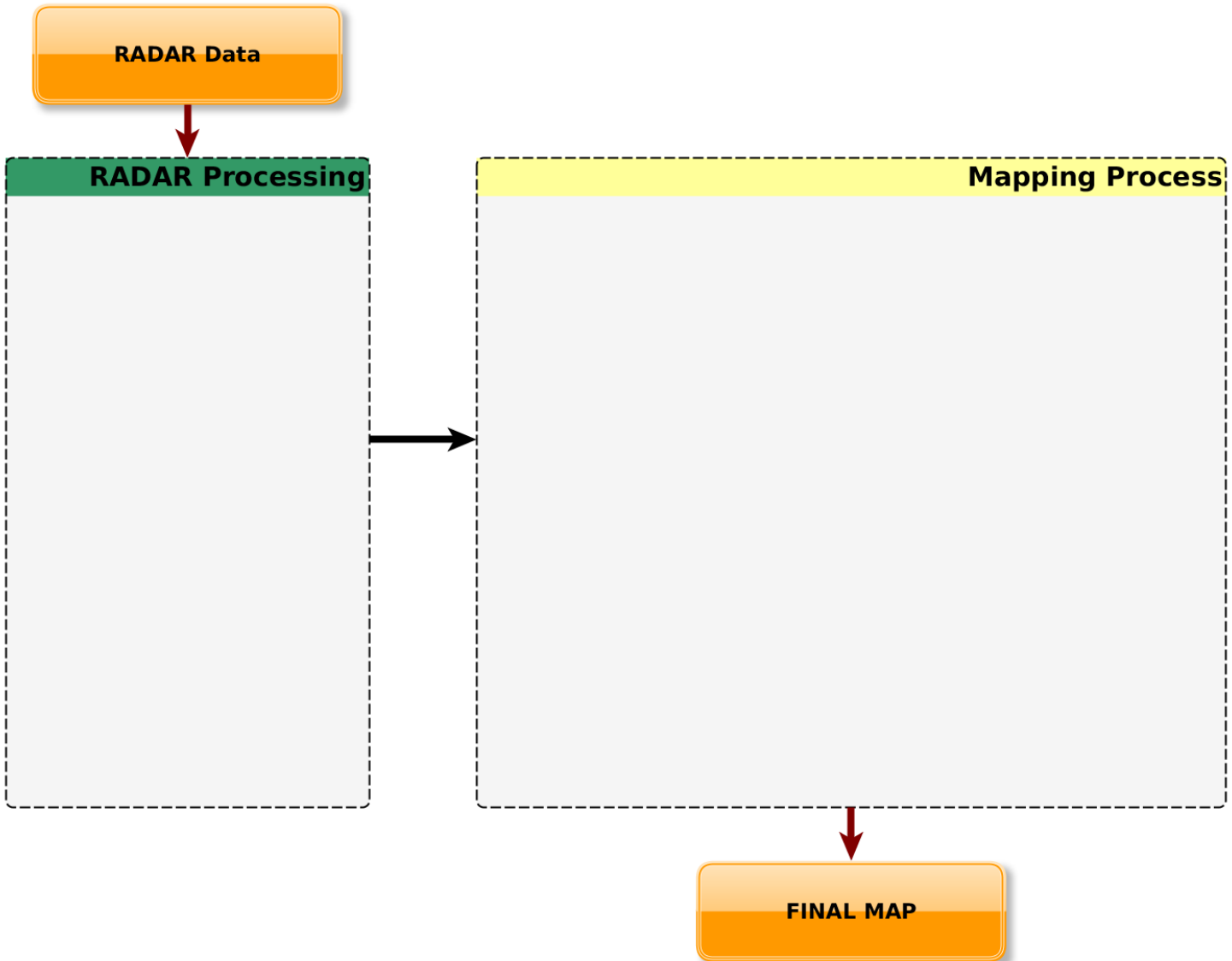
Objectives



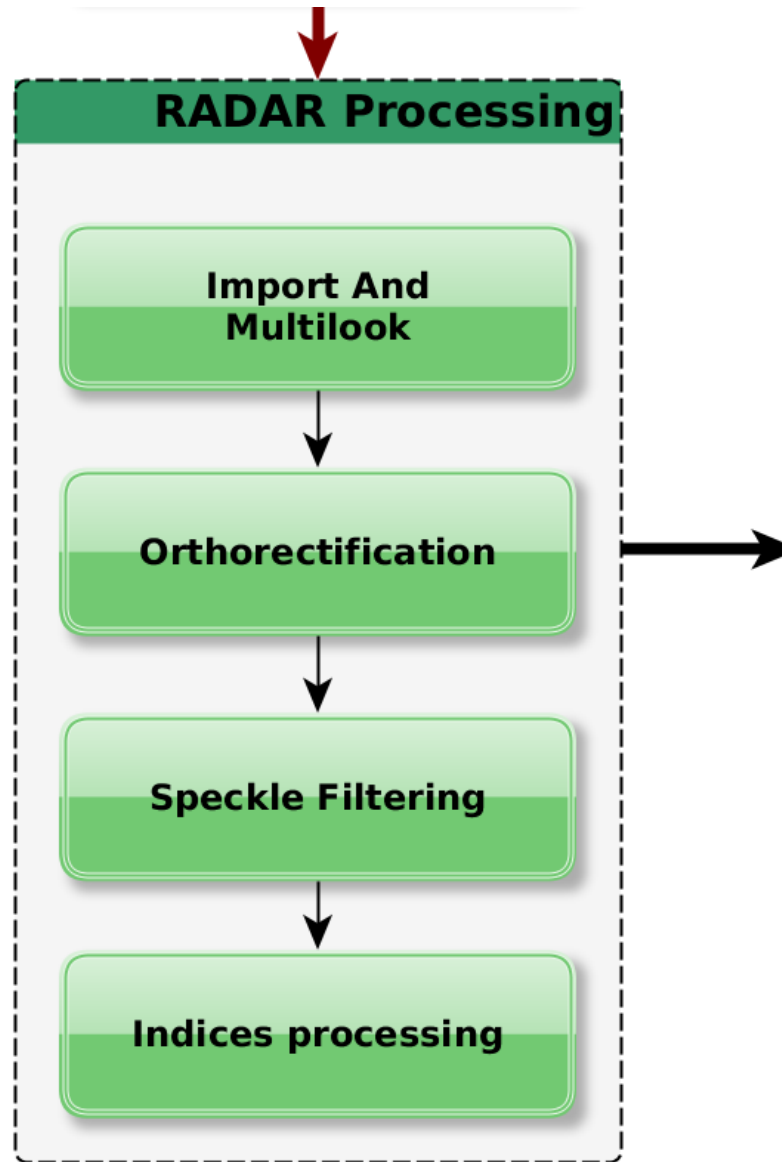
- In ***5 days*** !
- Be able to ***make (Forest) map*** with ***comon RADAR data***
- ***Initiation*** to the ***main RADAR Principles***
- Brief ***RADAR Sensor*** and ***aplication overview***
- Use ***Open Source software*** to produce the map
- Give you ***the way to deal with RADAR***



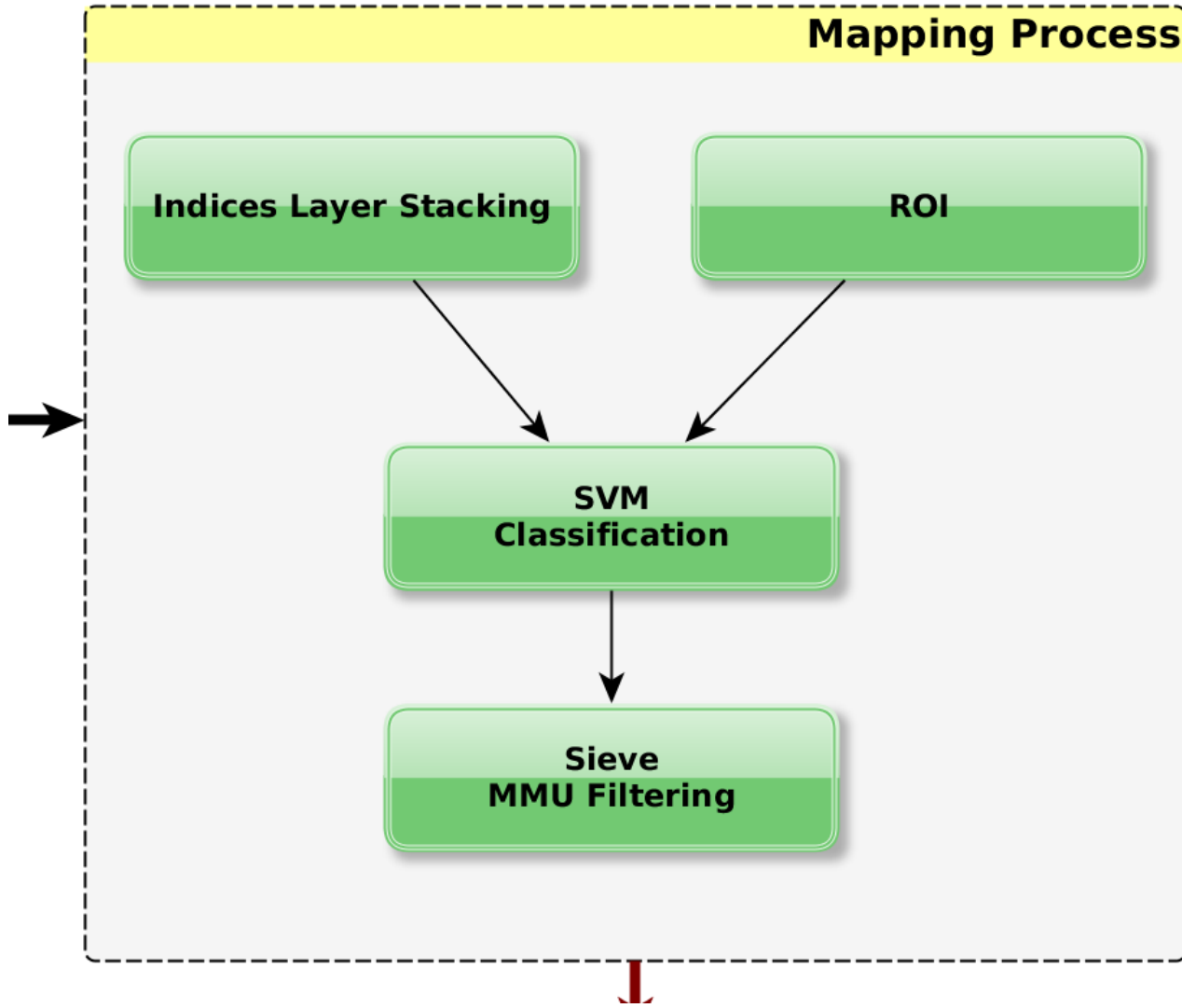
Processing Overview



Processing Overview



Processing Overview





Differents Open Source Software

- **RADAR**
 - **Nest** (ESA) : Main RADAR Processing
 - **PolSARPro** (ESA) : Polarimetric RADAR Processing
 - **MapReady** (ASF): Mainly for Orthorectification
- **Mapping**
 - **QGIS** : GIS software
 - **OTB** (Orfeo Toolbox): Remote Sensing processing (used inside QGIS)
 - **Saga, Grass** : GIS software (used inside QGIS)





Remote Sensing Processing need adaptability

- Use different software
- Each software (free or not) have bugs
- You need to take the best of each
- Read Documentation

→ **MAKE YOUR OWN Experience !!!**





- **Software Files**

- **Radar Training Data**
 - ASAR Envisat
 - Palsar full Pol
 - Jaxa Palsar World Mosaic

- **Tutorial files**
 - Doc
 - Video
 - ERS CD (ESA/UPEMLV)
 - Bibliography



Planning



<i>Monday</i>	
Morning	Introduction
Morning	Main RADAR Principle (Theory)
Afternoon	Display my first RADAR Data (ASAR) in NEST (Practical)
<i>Tuesday</i>	
Morning	More processing in Nest : RADAR Indices, Orthorectification, Speckle filtering... (Practical)
Afternoon	More processing in Nest : RADAR Indices, Orthorectification, Speckle filtering... (Practical)
<i>Wednesday</i>	
	Displaying and Interpretation of some RADAR Data (Practical)
	Processing of PALSAR polarimetric data (extraction, ortorectification...) (Practical)
<i>Thursday</i>	
Morning	How to use World PALSAR JAXA Mosaic ? (Practical)
Morning	Classification (Theory/Practical)
Afternoon	Classification (Practical)
<i>Friday</i>	
Morning	Classification (Practical)
Afternoon	Final Discussion

