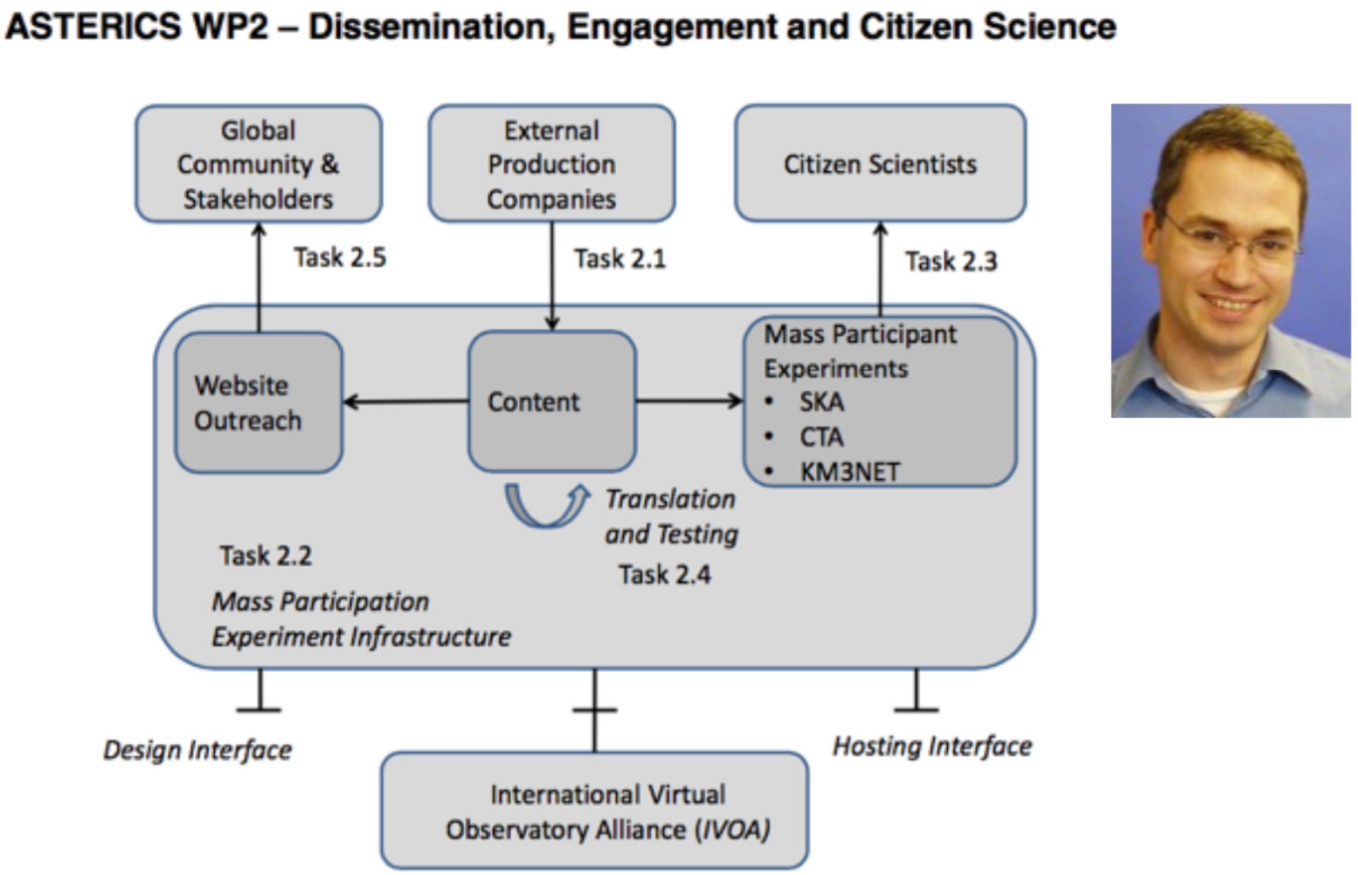
The ASTERICS project

Françoise Genova

ASTERICS

- Astronomy ESFRI Research Infrastructure Cluster
- Horizon2020 project Call September 2014 – Topic : Implementation of cross-cutting solutions for clusters of ESFRI research infrastructures
- Focus: ESFRIs - SKA, CTA, KM3Net, close links with E-ELT, plus EGO (new messengers)
- 22 partners, 15 M€, including 4.5 M€ for WP4, 4 years, began 1 May 2015
- Major collaboration Astronomy-Astrophysics/Astroparticle physics
- Multi-wavelength/multi-messenger

- DECS (WP2) - Stephen Serjeant (OU):



- OBELICS (WP3) - Giovanni Lamanna (CNRS-LAPP):

ASTERICS WP3: OBELICS (OBservatory E-environments LInked by common ChallengeS)

Figure 5: ASTERICS delivers a repository of services and Data Technology solutions for the ESFRI projects.

- CLEOPATRA (WP5) - A. Szomoru (JIV-ERIC):

ASTERICS WP5: CLEOPATRA: Connecting Locations of ESFRI Observatories and Partners in Astronomy for Timing and Real-time Alerts

Figure 7: CLEOPATRA delivers solutions for shared challenges of ESFRI facilities.

- DADI (WP4) - Francoise Genova (CNRS-OAS):

4.5 M€

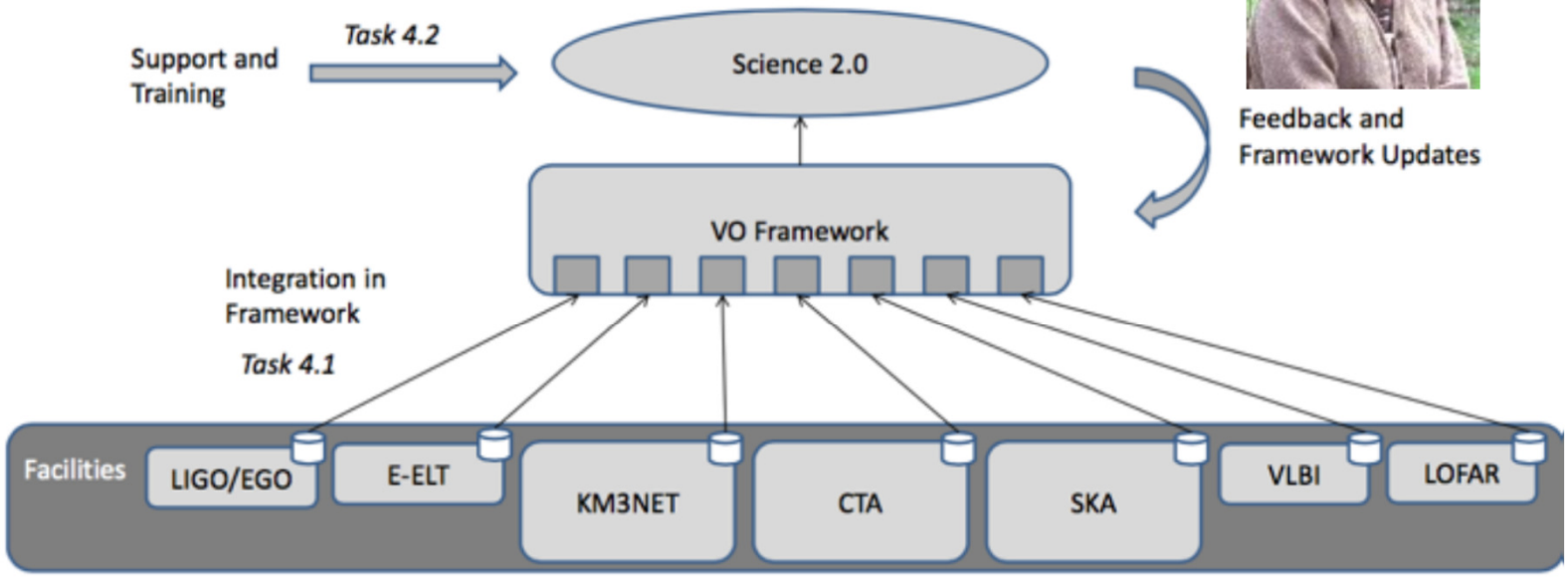


Figure 6: The ESFRI projects integrated in the VO Framework offers users uniform access.

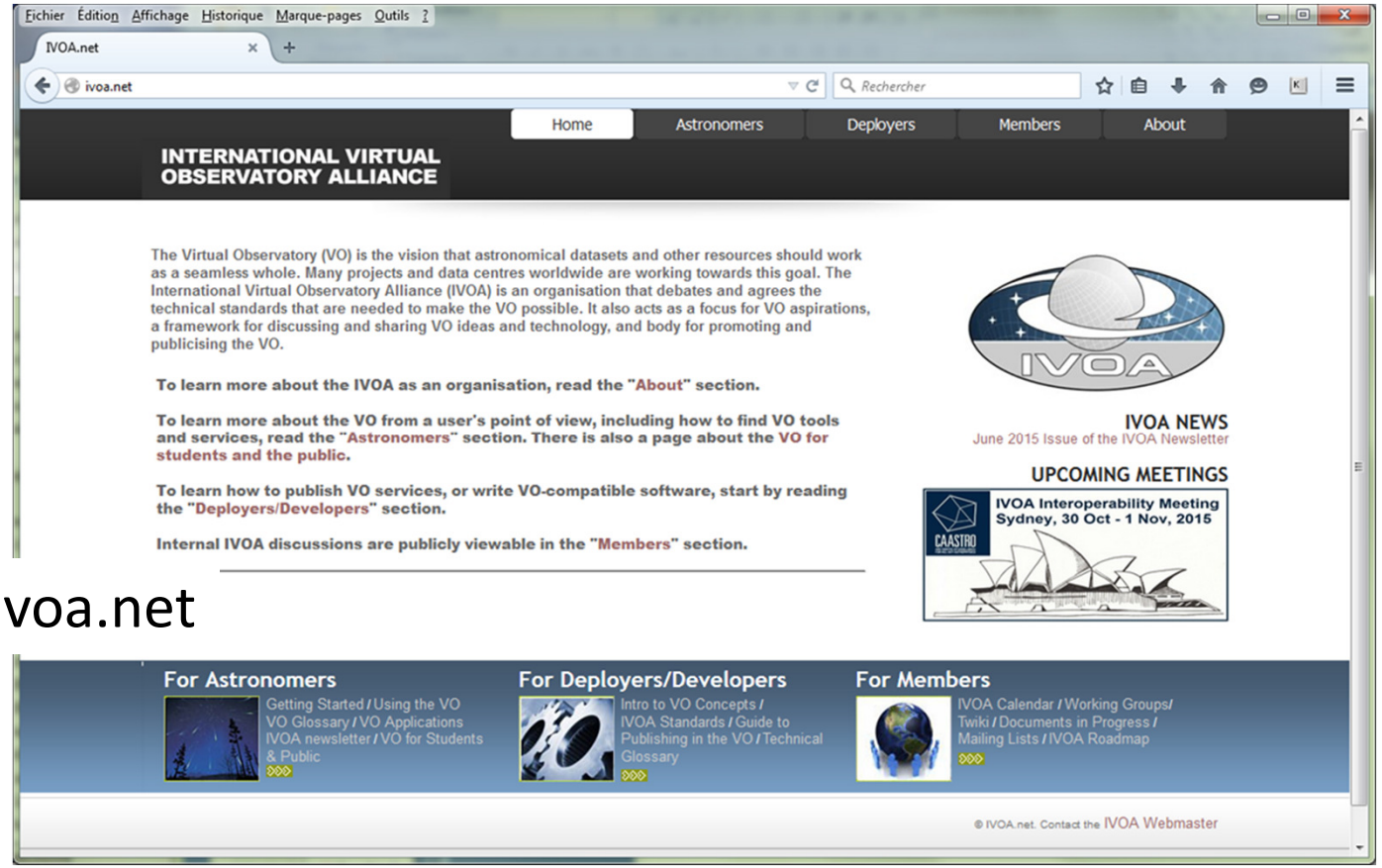
WP4 high level objectives

Make the ESFRI and pathfinder project data available for discovery and usage by the whole astronomical community, interoperable in a homogeneous international framework, the Virtual Observatory, and accessible with a set of common, VO-enabled, tools.

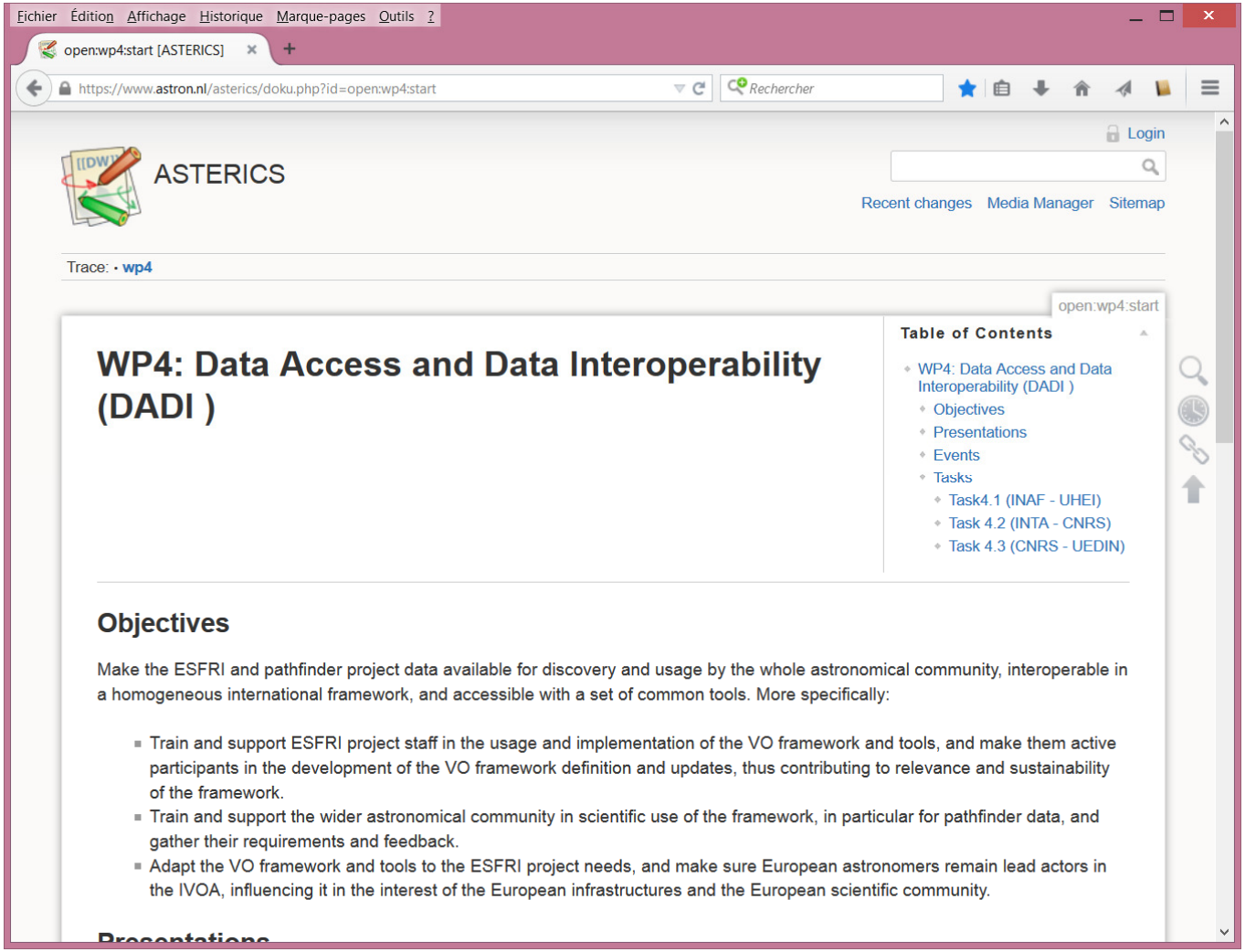
European VO teams AND ESFRI/pathfinder teams will be involved in *ALL* activities.

https://www.astron.nl/asterics/doku.php?id=open:wp4:start

The IVOA: VO standards



http://ivoa.net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WP4: Data Access and Data Interoperability (DADI)
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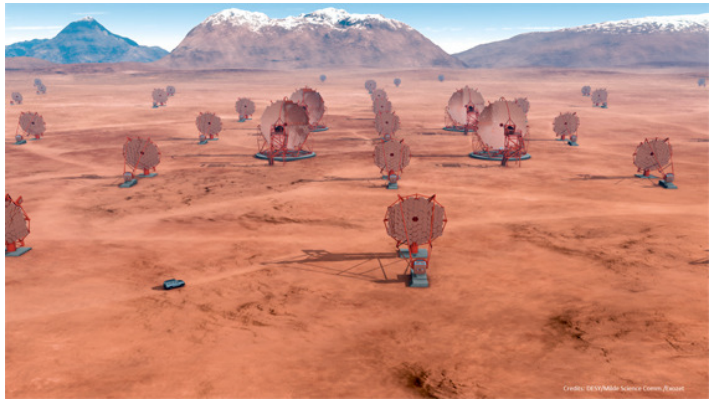
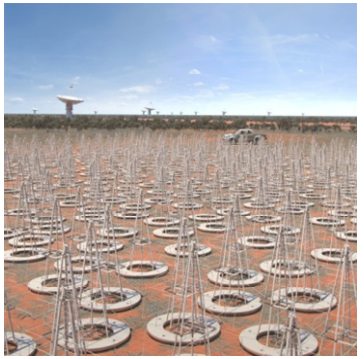
Objectives
Make the ESFRI and pathfinder project data available for discovery and usage by the whole astronomical community, interoperable in a homogeneous international framework, and accessible with a set of common tools. More specifically:
Train and support ESFRI project staff in the usage and implementation of the VO framework and tools, and make them active participants in the development of the VO framework definition and updates, thus contributing to relevance and sustainability of the framework.
Train and support the wider astronomical community in scientific use of the framework, in particular for pathfinder data, and gather their requirements and feedback.
Adapt the VO framework and tools to the ESFRI project needs, and make sure European astronomers remain lead actors in the IVOA, influencing it in the interest of the European infrastructures and the European scientific community.
Presentations

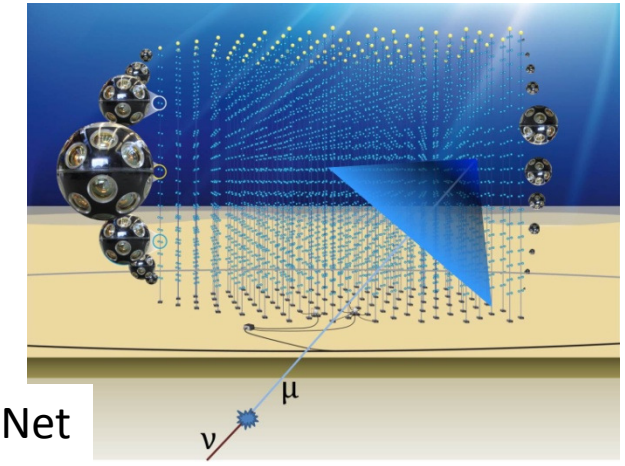
Who is involved



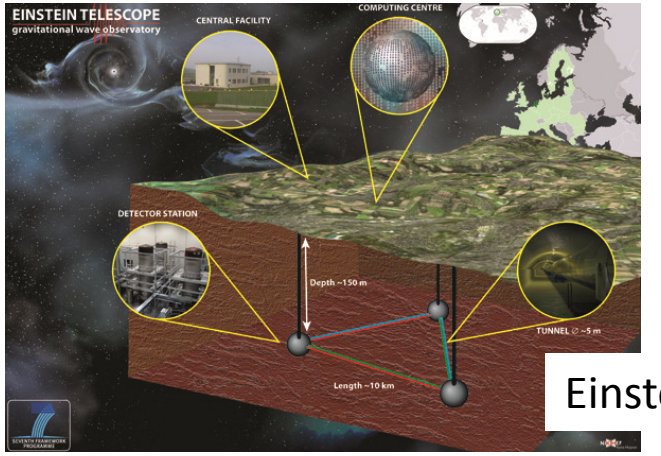
CTA



SKA



KM3Net



Einstein Telescope

Who is involved

- Euro-VO partners, i.e. VO initiatives from France (CNRS/OAS- CDS+UNISTRA), Germany (UHEI), Italy (INAF), Spain (INTA),UK (UEDIN)
- Representatives of ESFRI and pathfinders
  - CTA (CNRS/LUTH + OBSPAR)
  - EGO/VIRGO and ET (CNRS/APC)
  - KM3Net (CNRS/CPPM)
  - SKA (ASTRON)
- ESO is associated to the project
- ESA (ESAC) is working in close collaboration with Euro-VO

Targets

Three Tasks in support to three complementary targets

- Task 4.1: Support to astronomy ESFRI facilities, their pathfinders and other infrastructures of pan-European interest for implementation of their data in the VO framework
- Task 4.2: Support to the astronomical community
- Task 4.3: Updates of the VO framework from feedback and requirements

Task 4.2 – Support to the astronomical community (CNRS/INTA)

- Train and support the wider astronomical community in the scientific use of the framework (pathfinder data)
- Gather their requirement and feedback

Activities

- Provision of training (european, regional & national)
  - One European School/year (used as template for other events)
  - On-line science tutorials
  - Collaboration with science projects
- Gathering scientific requirements and feedback as input to Task 4.3

Task 4.3 – Updates of the VO framework from feedback and requirements (CNRS/UEDIN) (1)

Activities

- Identification of priorities (incremental process with input from Tasks 4.1 & 4.2)
  - Initial priorities: multi-D (including polarisation), time domain, provenance, adapt VO tools to new observables
- Update or definition of standards
  - Participation in the six-monthly IVOA meetings
  - ASTERICS DADI Technology Forums (2 the first year, then 1/yr)
  - Technical work in IVOA Working Groups and Interest Groups driven by the priorities

Task 4.3 – Updates of the VO framework from feedback and requirements (CNRS/UEDIN) (2)

- Updates of the data publication tools, s/w libraries and VO-enabled access tools (Repository of Products)
- Liaison with the Research Data Alliance and other initiatives dealing with interoperability
- Liaison with OBELICS (led by INAF)

DADI events and milestones

- ASTERICS-organised events
  - First DADI Technology Forum, Strasbourg 17-18 September 2015 (D4.1)
  - ESFRI Forum and Training Workshop,Trieste 3-4 December 2015 (D4.3)
  - This event: First ASTERICS School, Madrid 15-17 December 2015 (D4.2)
  - Second DADI Technology Forum, Edinburgh, March 2016 ? (D4.4)
- Milestones organised by others
  - IVOA meeting Sesto 14-19 June 2015
  - RDA Sixth Plenary meeting Paris 23-25 September 2015
  - IVOA Interoperability meeting Sydney 30 October-1 November + ADASS
  - RDA Seventh Plenary Tokyo 1-3 March 2016
  - IVOA Interoperability meeting Cape Town 9-13 May 2016