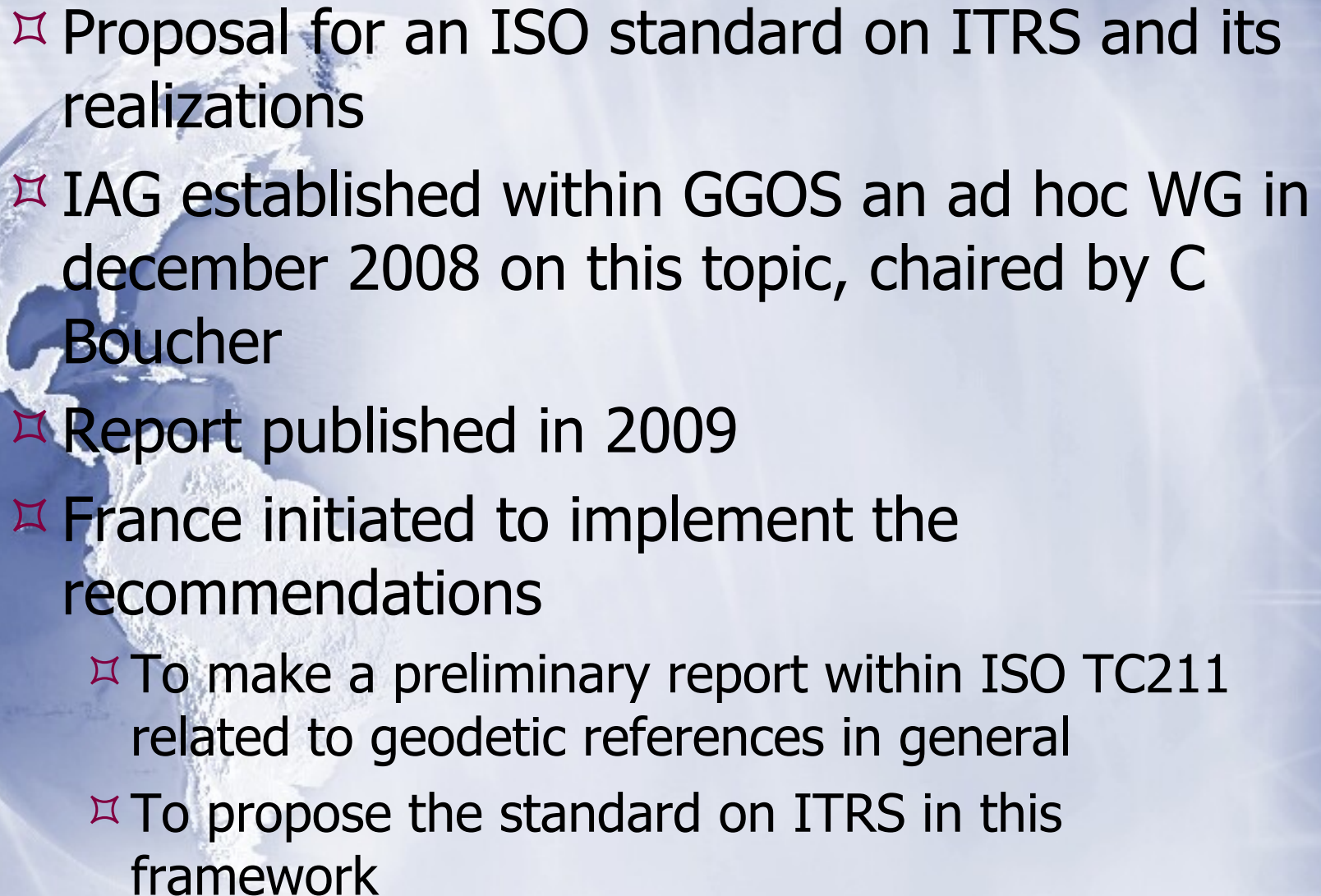
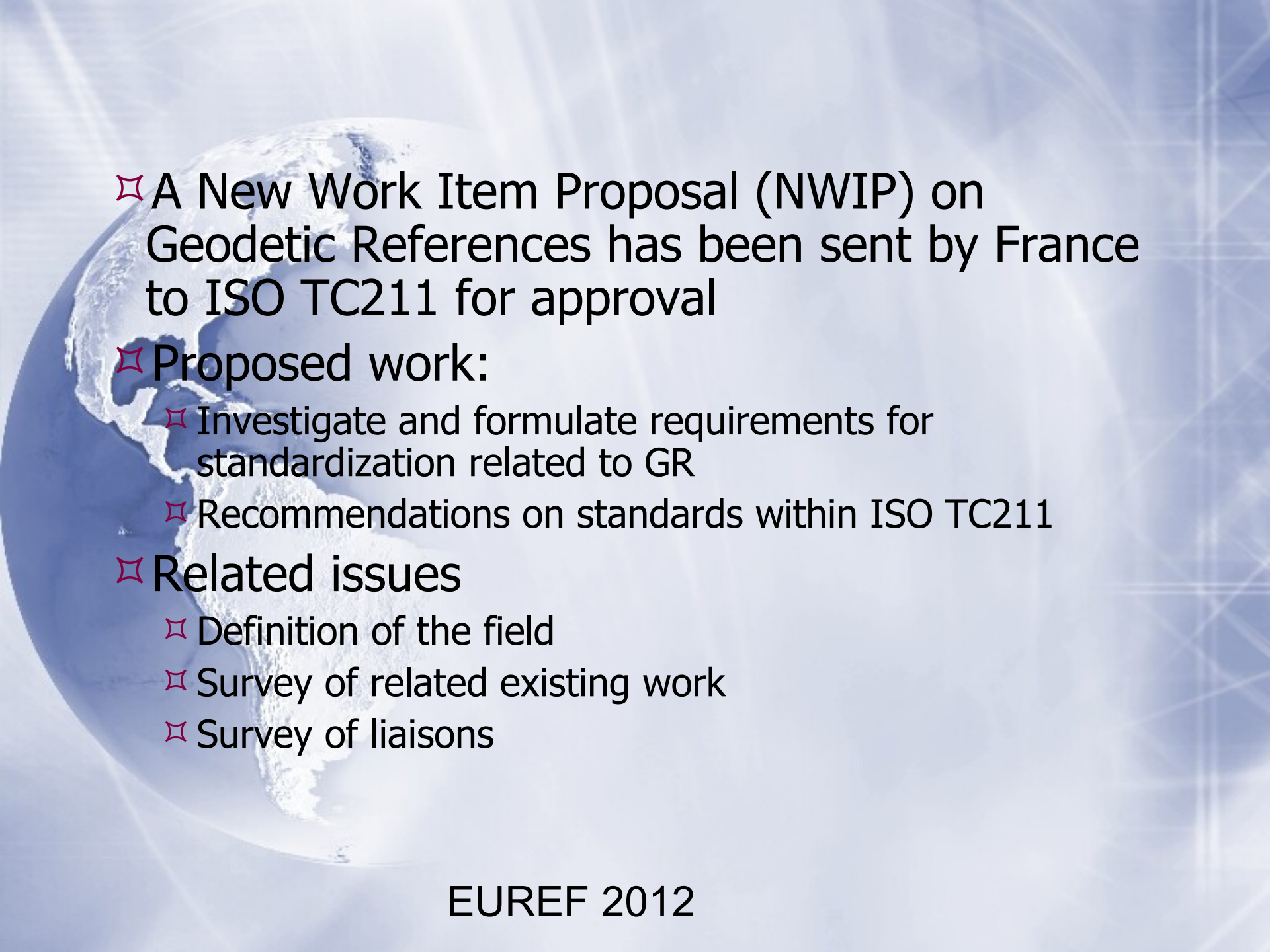




Initiative for a ISO/TC211 project on Geodetic References

Claude Boucher
MEDDE

- 
- ✧ Proposal for an ISO standard on ITRS and its realizations
 - ✧ IAG established within GGOS an ad hoc WG in december 2008 on this topic, chaired by C Boucher
 - ✧ Report published in 2009
 - ✧ France initiated to implement the recommendations
 - ✧ To make a preliminary report within ISO TC211 related to geodetic references in general
 - ✧ To propose the standard on ITRS in this framework



✧ A New Work Item Proposal (NWIP) on Geodetic References has been sent by France to ISO TC211 for approval

✧ Proposed work:

- ✧ Investigate and formulate requirements for standardization related to GR

- ✧ Recommendations on standards within ISO TC211

✧ Related issues

- ✧ Definition of the field

- ✧ Survey of related existing work

- ✧ Survey of liaisons

GEODETIC REFERENCES

- ✧ Geodetic datums
- ✧ Terrestrial reference systems and frames
- ✧ Geodetic ellipsoids
- ✧ Coordinate systems used for geo-referencing
- ✧ Map projections
- ✧ Gravity and geoid (gravity models, geoidal models..)
- ✧ Vertical reference systems
- ✧ Geodetic networks (classical triangulations or leveling, space geodesy, gravity stations...) and related metadata (such as station identifiers)

LIAISONS

- ✧ International Association of Geodesy (IAG)
- ✧ International Union of Geodesy and Geophysics (IUGG)
- ✧ International Federation of Surveyors (FIG)
- ✧ International Hydrographic Organization (IHO)
- ✧ International Cartographic Association (ICA)
- ✧ International Civil Aviation Organization (ICAO)
- ✧ Global Spatial Data Infrastructure (GSDI)
- ✧ Open GIS Consortium (OGC)
- ✧ International Committee for GNSS (ICG)
- ✧ International Bureau of Weights and Measurements (BIPM)
- ✧ International Astronomical Union (IAU)
- ✧



STANDARDIZATION ACTIVITIES RELATED TO GR: ISO TC211

- ✧ **ISO 19111 Geographic Information - Spatial referencing by coordinates**
- ✧ **ISO 19111-2 Geographic Information - Spatial referencing by coordinates - Part 2: Extension for parametric values**
- ✧ **ISO/TS 19127 Geographic Information - Geodetic codes and parameters**
- ✧ **ISO/DIS 19145 Geographic Information - Registry of representations of geographic point location**

STANDARDIZATION ACTIVITIES RELATED TO GR: OTHER ISO BODIES

- ✧ ISO TC 20 Aircraft and space vehicles /SC 14 Space systems and operations
 - ✧ Orbit determination and estimation
 - ✧ Reference coordinate systems
- ✧ Other?

STANDARDIZATION ACTIVITIES RELATED TO GR: OUTSIDE ISO

- ✧ IERS Conventions

- ✧ IERS is a joint IUGG/IAG and IAU international scientific service

- ✧ INSPIRE european directive for geographical information

- ✧ American Institute for Aeronautics and Astronautics (AIAA)

- ✧ International Hydrographic Organization (IHO)

- ✧ Radio Technical Commission for Maritime services (RTCM)

- ✧



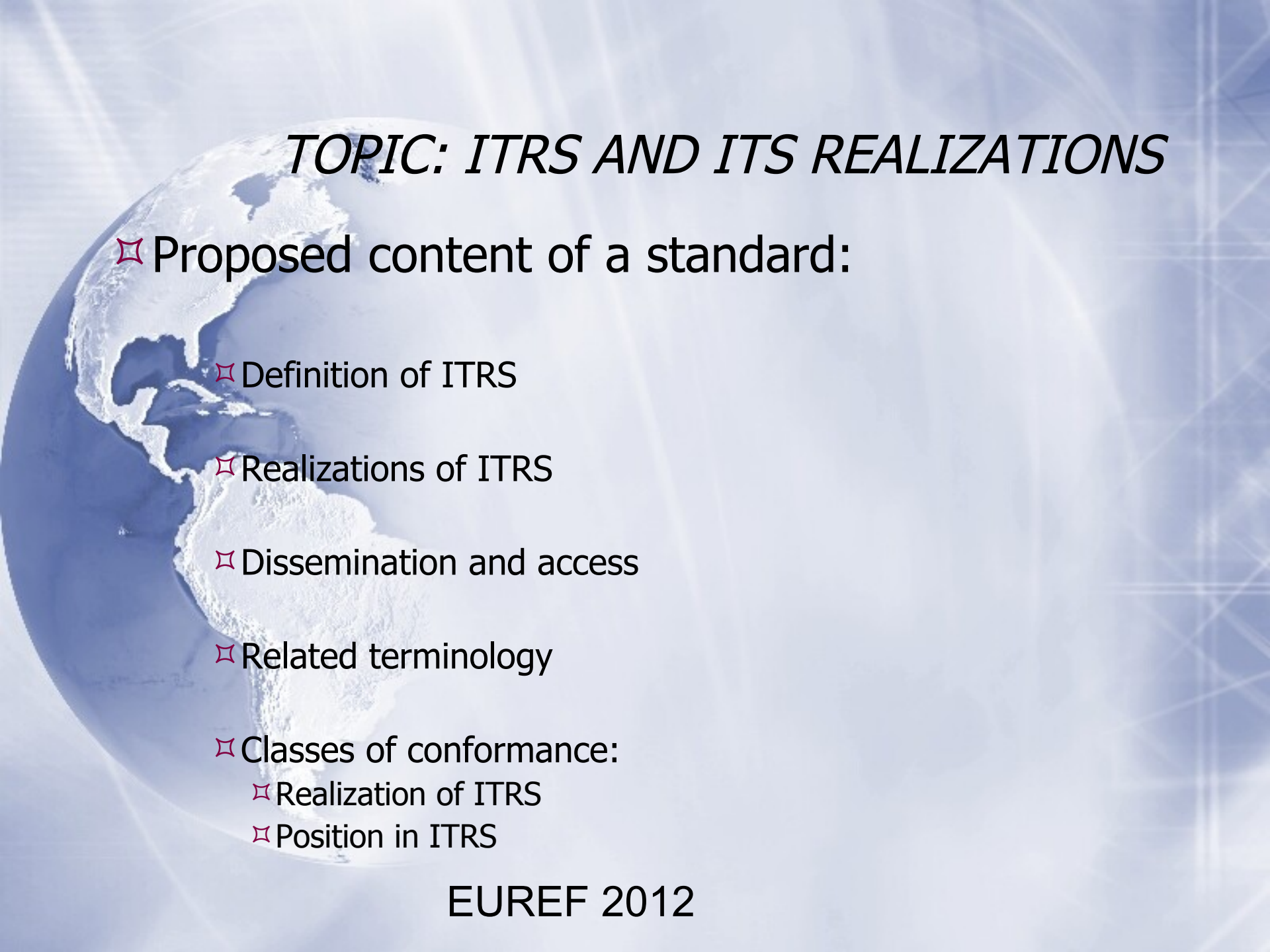
Some proposed topics

- ✧ ITRS and its realizations
- ✧ World vertical datum
- ✧ Universal identification of (space) geodetic stations

TOPIC: ITRS AND ITS REALIZATIONS

✧ Major requirements:

- ✧ To adopt ITRS beyond IUGG community, both for science and applications
- ✧ To explain consistency between ITRS, WGS84, ETRS89...
- ✧ To support interoperability of GNSS systems (cf ICG)
- ✧ To support metrological requirements expressed by CIPM
- ✧ To specify the concepts of realizations of ITRS, their variety and respective qualities



TOPIC: ITRS AND ITS REALIZATIONS

✧ Proposed content of a standard:

- ✧ Definition of ITRS

- ✧ Realizations of ITRS

- ✧ Dissemination and access

- ✧ Related terminology

- ✧ Classes of conformance:

 - ✧ Realization of ITRS

 - ✧ Position in ITRS

EUREF 2012



Conclusions

- ✧ Waiting for the ISO approval of the NWIP
- ✧ Liaisons to be appointed (J Torres presently for EUREF in the GGOS WG)
- ✧ Any comment/proposal welcome