

Future Cooperation between EuroGeographics and EUREF

*Johannes Ihde, Nick Land,
Joao Torres, Zuheir Altamimi*

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History

In the times of CERCO the cooperation with EUREF was realized by Working “Group VIII – Geodesy” which was merged within EUREF.

With the foundation of EuroGeographics (EG), the Working Group Geodesy was renamed to “Expert Group Geodesy” (ExG-G).

Within the last years, several geodetic related topics of common interest for the geo-information community came up.

Example:

Spatial Reference Workshop and the European Map Projection Workshop organized by MEGRIN 1999 and 2000, in collaboration with the Joint Research Centre (JRC) of the EC.

Results are recommendations that have been endorsed by the EC coordinating committee for GI (COGI) for use within the EC bodies and projects.

Present Situation

- ExG-G was re-organized in 2004 with 22 members representing member agencies of EG
- Terms of Reference (ToR) and a Working Plan for ExG-G were accepted by the Head Office of EuroGeographics in October 2004
- ExG-G covers issues related to:

The definition, understanding and implementation of geodetic reference systems for European-wide use which is a primary condition to achieve interoperability of mapping and other geo-information data.

The ExG-G is concerned with the geodetic components of reference data:

- **definitions,**
- **standards, and**
- **products (data and services)**

that support the geo-referencing of geo-information.

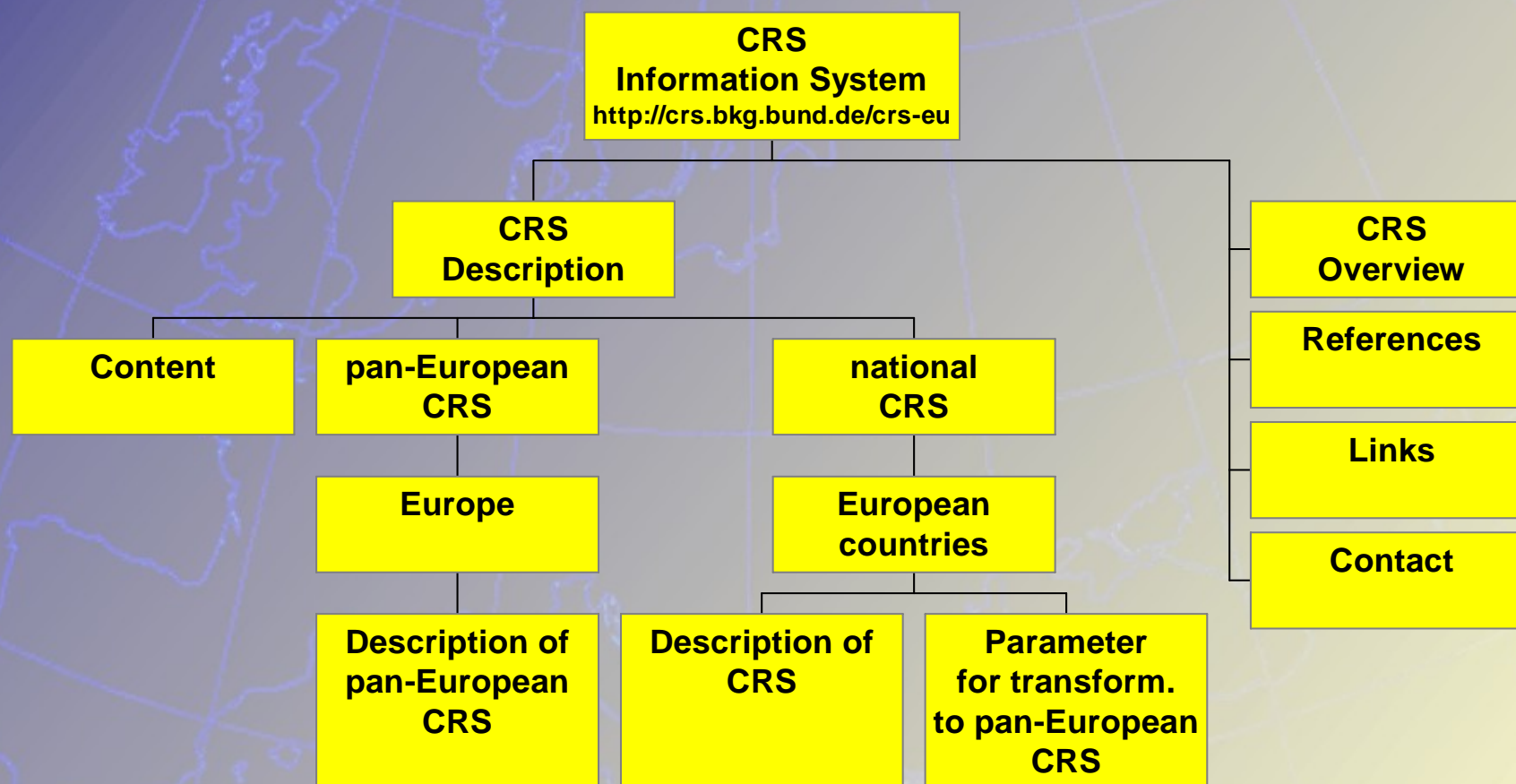
The ExGG has five core projects, integrated in its activities and defined in the ToR which are directly related to geodetic products (data and services):

- (1) Geodetic control station information**
- (2) European Vertical Reference System (EVRS) Implementation**
- (3) Real Time GNSS Service (EUREF-IP, NTRIP)**
- (4) Development of a product catalogue geodesy (INSPIRE)**
- (5) Information system for European Coordinate Reference Systems (CRS-EU)**

Actions and results:

- **2003: Decision of the European Commission to relate their own geographical data to ETRS89**
- **2004: EVRS Workshop**
- **Since 2005: Participation in INSPIRE drafting teams, Cooperation with project groups like EuroBoundaries and GEORail**
- **2006: NTRIP Workshop**

CRS Information System Structure



Information and Service System for European Coordinate Reference Systems - CRS

This Information and Service System for European Coordinate Reference Systems was established to support the users of spatial information in Europe.

It is a common project of:



Bundesamt für
Kartographie und Geodäsie



Bundesamt für Kartographie und Geodäsie (Federal Office for Cartography and Geodesy), Germany.

EuroGeographics as the central-hub for Europe's Geographic Information (GI) developments
- a unique and diverse network working of all concerned with European GI; National Mapping and Cadastral Agencies (NMCAs), the European Commission and others.

EUREF (European Reference Frame) as Sub-Commission of IAG's (International Association of Geodesy) Commission X on Global and Regional Geodetic Networks with the main task to establish and maintenance of the European Reference Frames.

The websites contain information of national European Coordinate Reference Systems and pan-European Coordinate Reference Systems for position and height.

On the sites the following information can be found:

- Description of national Coordinate Reference Systems
- Description of pan-European Coordinate Reference Systems (ETRS89 / EVRF2000)
- Description of Transformationparameters from national Coordinate Reference Systems to pan-European Coordinate Reference Systems including
 - Quality of transformation
 - Verification data of transformation
 - possibility for online conversion and transformation of single points for test and verification

Homepage

<http://crs.bkg.bund.de/crs-eu/>

Selection of National CRS Information

Information about National Coordinate Reference Systems (CRS) of European countries

- descriptions of Coordinate Reference Systems
- transformation parameters to pan-European CRS (ETRS89 / EVRF2000)
- verification data for transformation
- **in preparation:** online-transformation of single points for test and verification purposes (**Demo version available**)

To get the information select a country in the list or click on the corresponding red dot in the map

Albania
Austria
Belgium
Bosnia-Herzeg.
Bulgaria
Croatia
Cyprus
Czech Republic
Denmark
Estonia
Finland
France
Germany
Gibraltar
Great Britain
Greece
Hungary
Iceland
Ireland
Italy

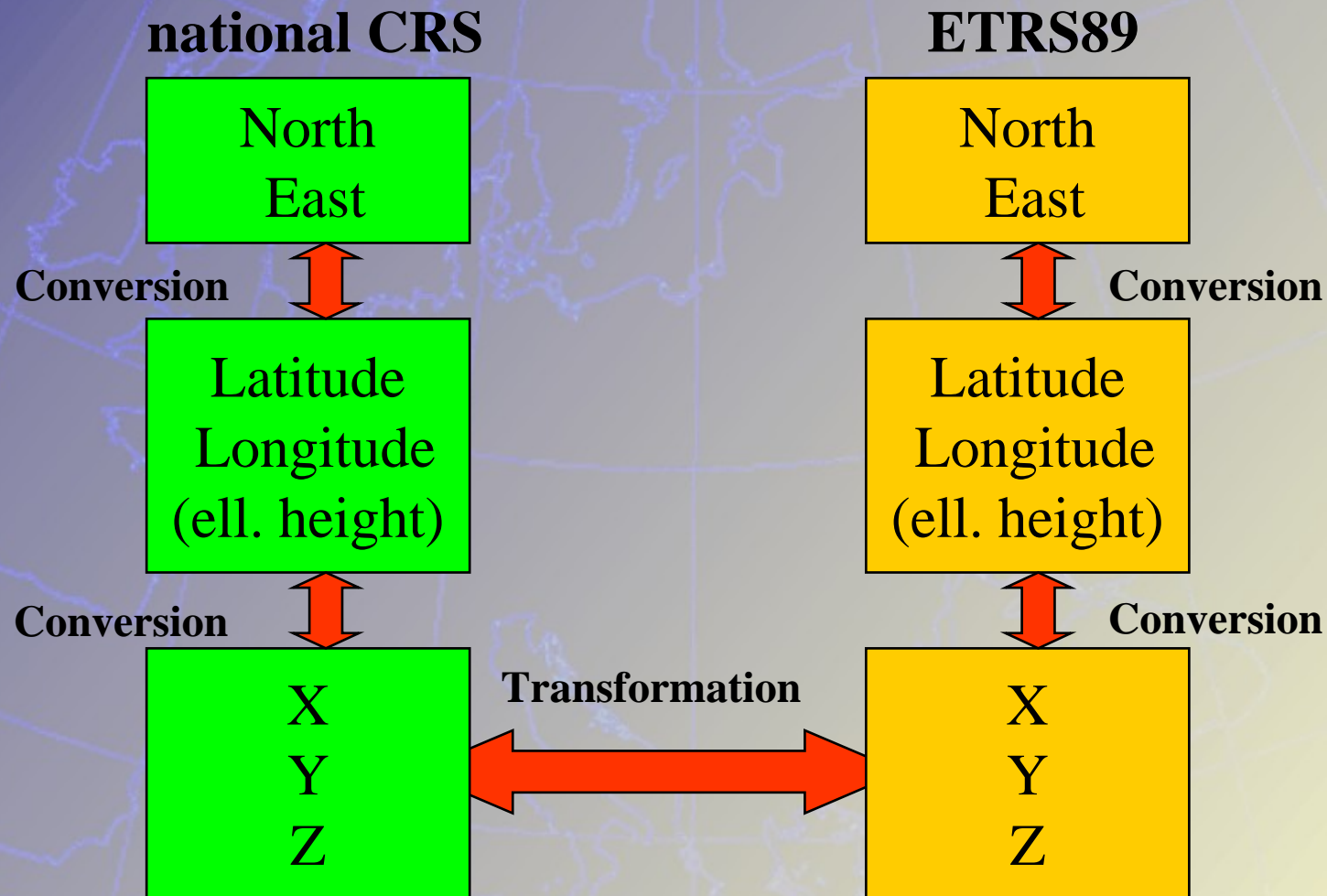


Latvia
Lithuania
Luxembourg
Macedonia
Malta
Netherlands
Northern Ireland
Norway
Poland
Portugal
Romania
Russia
Slovak Republic
Slovenia
Spain
Sweden
Switzerland
Turkey
Ukraine

Selection of CRS Information for Position and Height

Germany (DE)			
CRS Identifier	CRS Annotation	Description of	
		CRS	Transf.
Position			
DE_42/83 / GK_3	Datum 42/83 with Gauss-Krüger-System	<input checked="" type="radio"/>	<input type="radio"/>
DE_DHDN / GK_3	Datum DHDN with Gauss-Krüger-System (also known as Rauenberg or Potsdam Datum)	<input type="radio"/>	<input type="radio"/>
DE_ETRS89 / UTM	Datum ETRS89 for Federal State Brandenburg with UTM Projection (one zone extended)	<input type="radio"/>	<input type="radio"/>
DE_PD/83 / GK_3	Datum PD/83 with Gauss-Krüger-System (realisation of Potsdam Datum for Federal State Thüringen)	<input type="radio"/>	<input type="radio"/>
DE_RD/83 / GK_3	Datum RD/83 with Gauss-Krüger-System (realisation of Rauenberg Datum for Federal State Sachsen)	<input type="radio"/>	<input type="radio"/>
Height			
DE_AMST / NH	normal heights referred to tide gauge Amsterdam (also known as DHHN92)	<input type="radio"/>	<input type="radio"/>
DE_AMST / NOH	normal-orthometric heights referred to tide gauge Amsterdam (also known as DHHN85)	<input type="radio"/>	<input type="radio"/>
DE_KRON / NH	normal heights referred to tide gauge Kronstadt (also known as SNN76)	<input type="radio"/>	<input type="radio"/>
		<input type="button" value="Submit"/>	
<input type="button" value="History / Changes"/>		<input type="button" value="National Mapping Agency / Source"/>	

Online Transformation - Position



A position paper about „Operational Procedures of ExG-G” was drafted after EUREF Symposium and ExG-G meeting in Riga.

The objectives of the strategic discussion in 2006 of the ExGG was

- to mobilize the members,**
- to improve the work and the effectiveness of the results, and**
- to better meet the needs of customer.**

In this context it was planned to review the ExGG Work Plan.

After discussion in the ExG-G and in agreement with the EG Head Office and the EUREF TWG it was decided:

- To continue the general work items**
- To establish a Memorandum of Understanding between EuroGeographics and EUREF to regulate the future cooperation.**
- To realize all work of the ExG-G by EUREF TWG or EUREF special project groups.**

A Memorandum of Understanding (MoU)
between EuroGeographics and EUREF has been
drafted by the Management Board of
EuroGeoGraphics and the Technical Working Group
of EUREF and has been agreed by both.

**The MoU will soon be signed by EuroGeographics'
Executive Director and the EUREF Chair.**

Main Items of the MoU between EuroGeographics and EUREF within the Areas of Geodetic Reference Systems and the wider use of Geodetic Products for Geo-referencing of Geo-information

- **The Participants have a common understanding that Geodesy is a basic and integrated part of Geographic Information and Spatial Data Infrastructures.**
- **The annual EUREF Symposia are the official plenary of EUREF. They will be developed as a common platform of EUREF and EuroGeographics for geodetic activities in the fields of Geodetic Reference Systems and referencing of Geographic Information.**
- **The Memorandum of Understanding (MoU) is a more intensive continuation of the hitherto cooperation for common interests between both Participants**

Next core tasks and activities of cooperation between EuroGeographics and EUREF

- **Implementation of the European Vertical Reference System (EVRS) 2007**
- **Geodetic contribution to the implementation of INSPIRE**
- **Implementation of GNSS real time components**
- **Development of CRS-EU information system to a on-line transformation service**

Start to a new phase of networking in geo-information

Fields of common interest for a cooperation of EUREF and EuroGeographics are related to the following subjects:

- **Promote EUREF products especially concerning the adoption of the reference systems defined by EUREF (European Terrestrial Reference System and European Vertical Reference System) in the European countries and European-wide organizations involved in geo-referencing activities**
- **Geo-referencing of geo-data and geo-information for the realization of a European Spatial Data Infrastructure (ESDI)**
- **Densification of European geodetic networks**
- **Determination of the relationships between national and European reference systems**
- **Continental, regional and local positioning.**
- **Recognize and select relevant geodetic issues and indicate actions in projects of EuroGeographics**

- **Coordinate the cooperation between EG and EUREF in the field of geodesy**
- **Develop activities in geodetic fields not yet covered by EUREF**
- **Specify and adopt solutions of EUREF for applications in EG projects**
- **Prepare and support the use of new geodetic technologies and products**
- **Define products, prepare guidelines, standards and validation procedures**
- **Advise project groups of EuroGeographics and ESDI groups in geodetic questions and tasks**
- **GMES, Galileo, ISO**
- **Coordination of communication and lobbying activities to the European Commission and other relevant stakeholders**