



# **CROPOS CROatian Positioning System**

Marijan Marjanović

## cropos CROatian Positioning System

The goal of the project is to establish a unique national system of reference GNSS stations of the Republic of Croatia - CROPOS.

#### **CROPOS** system will have following basic characteristics:

- collecting the data from the reference stations that will be placed at 30 locations at the territory of the Republic of Croatia
- reference station real-time GNSS data exchange with the neighbouring countries
- networking and computing the real-time correction parameters
- distribution of measuring data and real-time correction parameters to the users
- monitoring of the system operation and users support
- 24/7 service availability

#### **ACTIVITES (1)**

- Project started (2004)
- Feasibility study GTZ support (2004/2005)
- PHARE 2005
  - Project Fiche

Modernization and Capacity Building of Integrated Land Administration System in Croatia and Harmonization in the Pilot Area

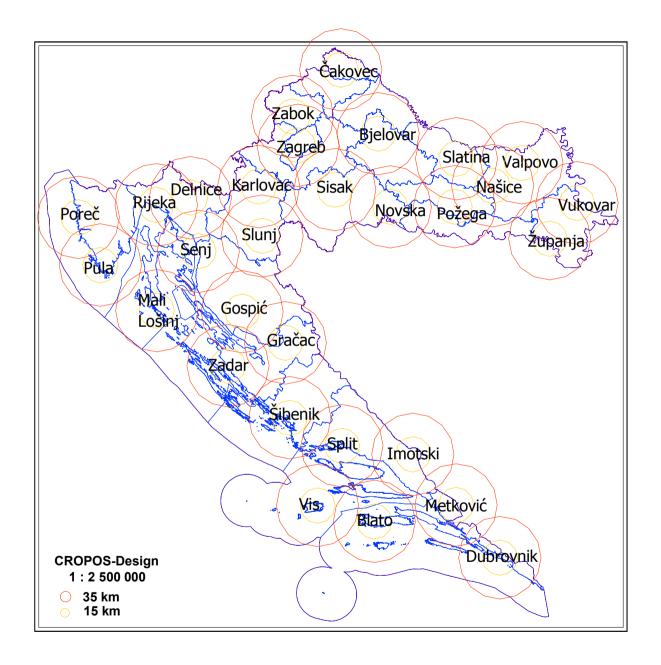
#### **R3: CROPOS System**

- Project approvement (September 2005)
- Financial agreement (December 2005)

#### **ACTIVITES (2)**

- Network design reference station locations
- Installation of antenna carriers (65% finished)
- IT/ITC infrastructure project
- Tender documenation and technical specifications
- Tender launched 4<sup>th</sup> May 2007 (Open: 16<sup>th</sup> July 2007)
- Contract sign September 2007
- CROPOS in full functionality September 2008

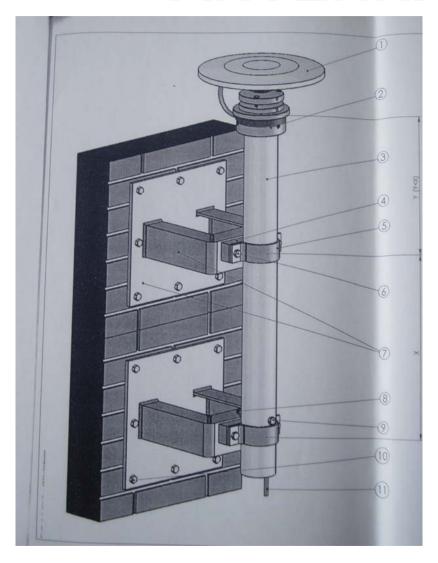


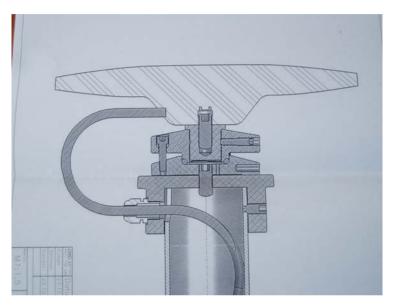


#### **SERVICES**

CROPOS service	Procedure/ Method	Accuracy
DPS differential positioning	code network solution in real time	±0.3 m to ±0.5 m
VPPS highly precise positioning	phase network solution in real time	±2 cm (2D) ±4 cm (3D)
GPPS geodetic highly precise positioning	post-processing	±1 cm (2D, 3D)

### **ANTENNA CARRIER**







#### **KARLOVAC**

### **ČAKOVEC**





#### IMPLEMENTATION PROGRAM

- Establishment of permanent GNSS-network of the Republic of Croatia - CROPOS (A1)
- Elaborating of unity transformation model HTRS96/HDKS (A2)
- Elaborating of new geoid model (A3)
- Renewal and establishment system of maintaning ordinary geodetic sites of basic horizontal geodetic networks (A4)
- Control measurements of basic network (A5)

# The CROPOS system will influence future surveying in Croatia because it should provide:

- introduction and application of a new geodetic datum of the Republic of Croatia
- homogenization of coordinate system
- the same accuracy of measurement and coordinate determination at the entire territory of the Republic of Croatia
- utilization of the unique measurement methods
- standardization in performing of geodetic works
- faster and more efficient performing of geodetic works