Present situation of precise real-time GNSS positioning market in Moldova

Is presented by
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TUM Achievements

- First Moldavian Continuous Operating GPS Reference Station CTIG_1 in 2006
  - Hardware: Reciever Trimble 5700 + Antenna Zephyr Gepdetic
  - Software: Trimble GPSBase 2.62

- First RTK IP service in Moldova lunched at 2006

- CTIG_1 CORS data was used for ortofoto creation works

TUM Achievement

CTIG project improved position accuracy of Google image for Chisinau from 70 to 3 meters in 2008.

We used CTIG_1 CORS data & Trimble GeoXT handheld to collect road borders.

Before

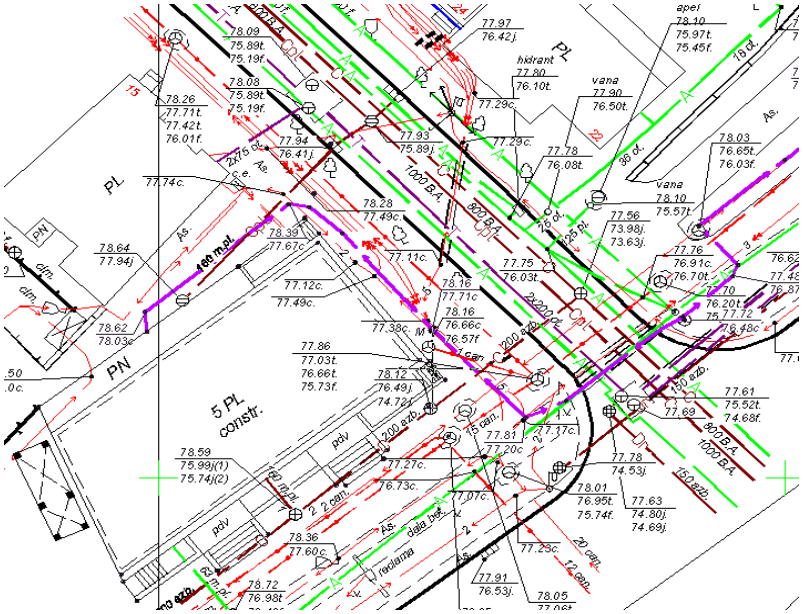
After

TUM Achievements

Using of CTIG_1 data in Chisinau for:

- surveying and cadastre

with the agreement between Department of Architecture of mun. Chisinau and Tehnical University of Moldova



- «As built» survey

«As built» surveying of utilities is executed in the open trench (photos should be attached)

TUM Researches

Long range RTK over internet measurments

In 2008 & 2009 work group tested long range RTK measurements from CTIG_1 and from ROMPOS VRS & single stations

Distances: from 70 to 170km

Equipment: Trimble 5800, R6 & R8

Results overview:

Initialization time: 1-10min

NEZ errors on control points:<10cm

Who will use precise GNSS positioning in Moldova ?

Right Now

- Land cadastre surveyors
- Detail topografic surveyors

Next year or may be in next several years

- Utility companies
- Emergency agencies
- Agencies for forest & river administration
- Road reconstruction contractors

How many customers can be next years?

	In 1 year	In 3 years
Surveyors	20	40
Utility companies	10	30
Emergency agencies	10	30
Agencies for forest & river administration	10	30
Road reconstruction contractors	10	20

Why so little customers now?

Lack of geodata

- Very few companies/agencies have enough accurate data to be used in precise GNSS application

Incomprehension of the middle managers almost everywhere

- Why do we need this accurate data?
- Why do we need this precise positioning?

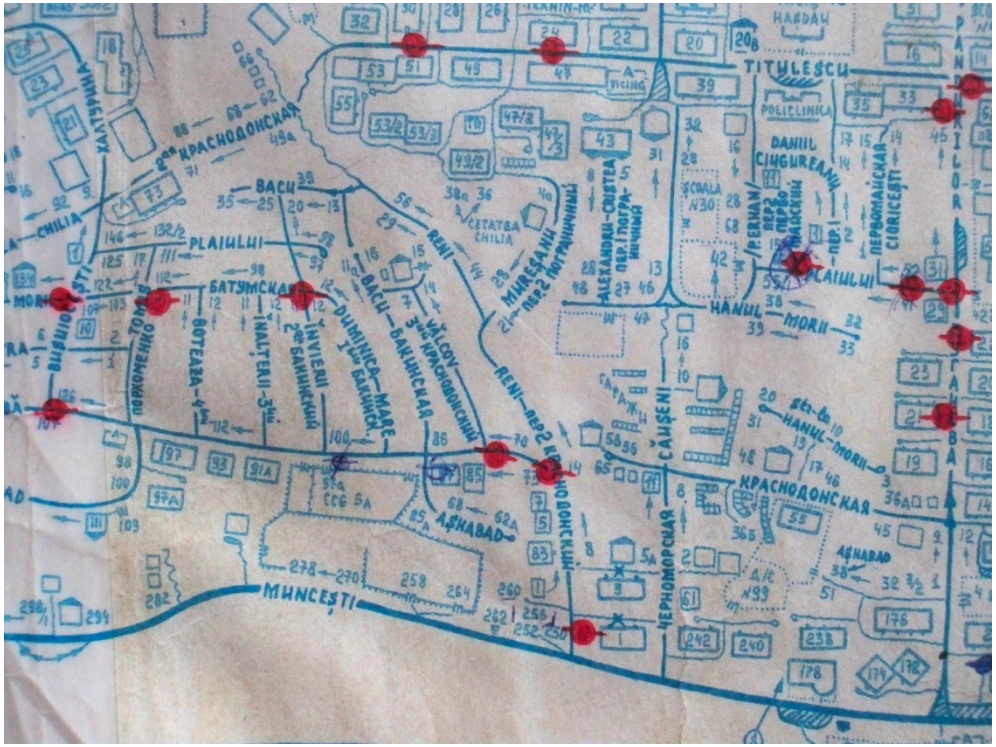
Examples

Accurate fire hydrant map for Chisinau

- There was no digital map of hydrants with accurate positions till summer of 2009
- The map was created within a diploma work by a student at TUM GCG
- Geodata was collected using submeter real-time service with GIS grade handheld from CTIG_1

Examples

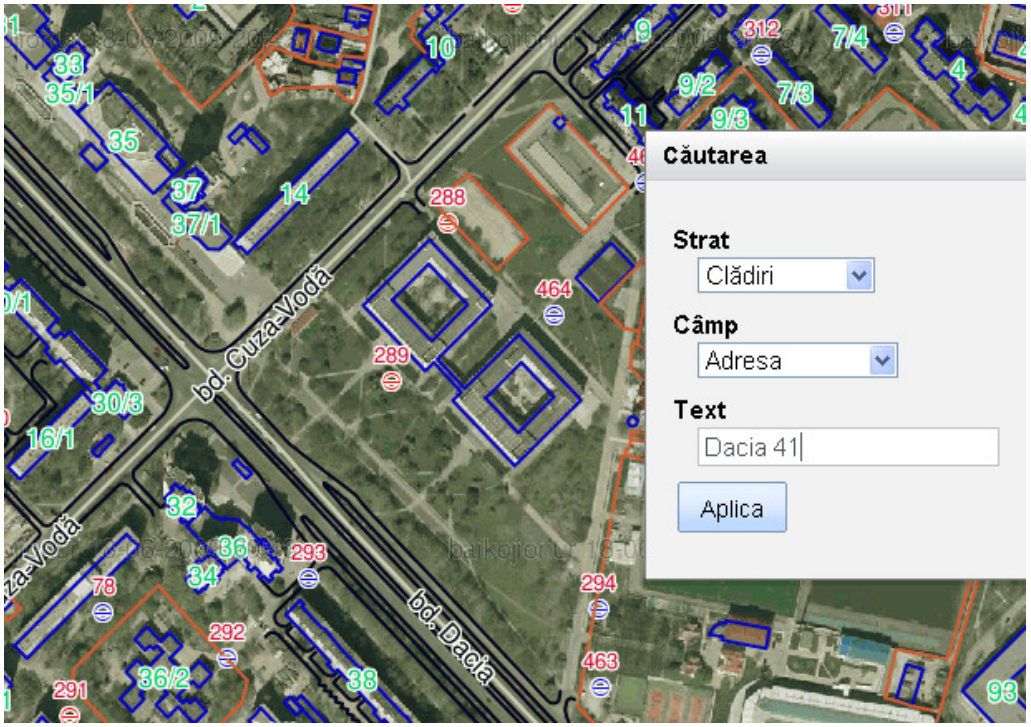
Before



Accurate fire hydrant map for Chisinau

- Data was uploaded to the municipal server within a TUM CTIG project to provide fire dispatchers with address, ortofoto & hydrant data search and visualisation
- Now the service is moved to ARFC server in order to create a fire hydrants database for entire country

After



Conclusions

- Real time precision GNSS positioning market is very young in Moldova
- We believe that with the lunch of MOLDPOS more users will benefit of this service and more applications will appear

Thank you for your patience ;)

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