VRS RTK-NETWORK SERVICE in Finland

Trimble VRS... the standard for Europe

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Geotrim Ltd: 9 main product segments

19 employees

- LASERs
- MACHINE CONTROL
- TACHYMETERS
- LASER SCANNERS
- GPS/GNSS RTK / Surveying
- GPS/GIS
- Satellite communication
- VRS Network GPSnet.fi service
- Service
- Support
- Training

Geotrim Ltd: 19 employees

Trimble
VRS Networking in Finland, GPSnet.fi
- owned by Geotrim Ltd
- Trimble GPSNet/RTKNet software
- started July 2000
- nation wide since May 2005
- 86 stations
- Geotrim has 6 years experience from VRS technology

GPSnet.fi
VRS Networking in Finland GPSnet.fi

Nation wide since May 2005
- 86 stations
- ADSL data lines
- Control center in Vantaa near Helsinki
SERVICES:

VRS RTK RTCM, gprs, gsm
VRS RTK CMR, gprs

VRS DGPS RTCM, gprs

DGPS single station; 4 stations, gprs
RTK single station; 2 stations, gprs, radiomodem

postprocessing data (1 sec ...); single station/VRS data, web server

postprocessing service
GPSNet.fi
GPS Webserver

Tervetuloa GPSNet.fi web-palveluun

Web-serverin avulla voit mm.

- Ladata Rinex-dataa tukiasemilta
- Ladata virtuaalista VRS rinex-dataa tukiasemaverkosta
- Saat infoa tukiasemaverkon tilasta
- Saat infoa ilmakehän ja ephemeridivirheistä jne.

[Image of a map on the GPSNet.fi website]
GPSnet.fi station
Kilpisjärvi

GPSnet.fi receivers:

- **Trimble (79%)**
- **Javad (10%)**
- **Leica (5%)**
- **Geotracer (3%)**
- **Ashtech (3%)**

Trimble Zephyr Geodetic/radome antenna
Co-operation

National Land Survey of Finland (NLS)
- main user of GPSnet.fi

Finnish Geodetic Institute (FGI),
- computes coordinates for Network stations
  (EUREF-FIN reference frame)
GPSnet.fi service, user fees

VRS RTK 2600-3500 euro/year/single licence
VRS DGPS 700-1000 euro/year/single licence
postprocessing data 2500 euro/year or 50 euro/station/day
(GSM/GPRS costs not included, GSM 0.10-0.20 euro/minute, GPRS 15euro/100Mb.)

According to users:

Increased productivity >= 20-70% (€€€€…€€€€€/year) compared to traditional RTK /unit
GPSnet.fi users

National Land Survey  Municipality organisations, cities
Government organisations  Power utility companies
Forest organisations  Telecommunication companies
Surveying and construction companies
Geodetic/ Geological/ Meteorological institutes, Universities etc.

Trimble
GPSnet.fi users

300 VRS RTK licences May 2006

95 %  GPRS users

5 % GSM data users

user -time:
~ 1500 hours / week
> 1000 GPRS conn./day

GPRS connection time 2 min … 6 days, typical 1-2 hours
The future

- more users (RTK, DGPS, postprocessing)
- more applications
- GPS modernization / Glonass/ Galileo
- new communication technics, what next after GPRS … ???
GPSnet.fi
VRS Service
All applications
RTK,
DGPS,
postprocessing