



Acquisition, storage and distribution of data and metadata of the Italian CGPS network (RING)

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1. The project:

- Introduction (about RING)
- The KM infrastructure
- Technological environment

2. Data Sources Layer:

- Data and information
- File system
- Relational Database

3. Knowledge Management Layer:

- The KM tools
- CLINIC software
- CLINIC flow chart

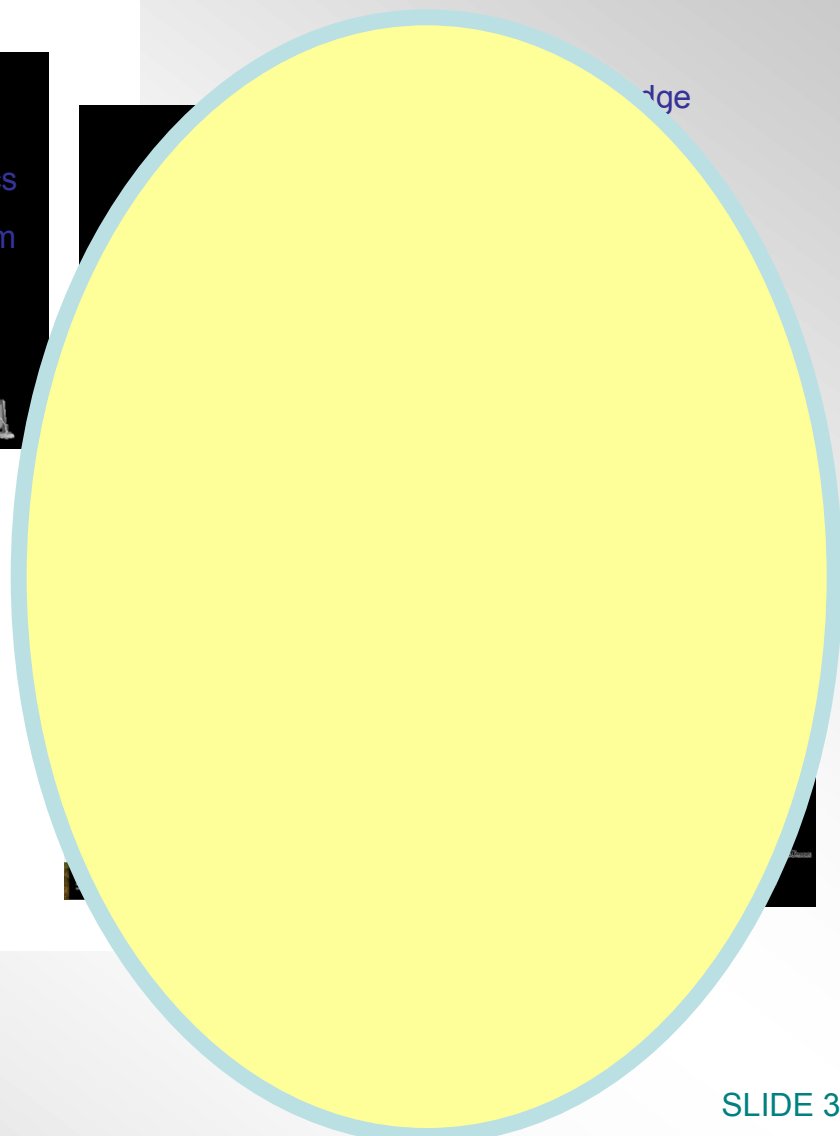
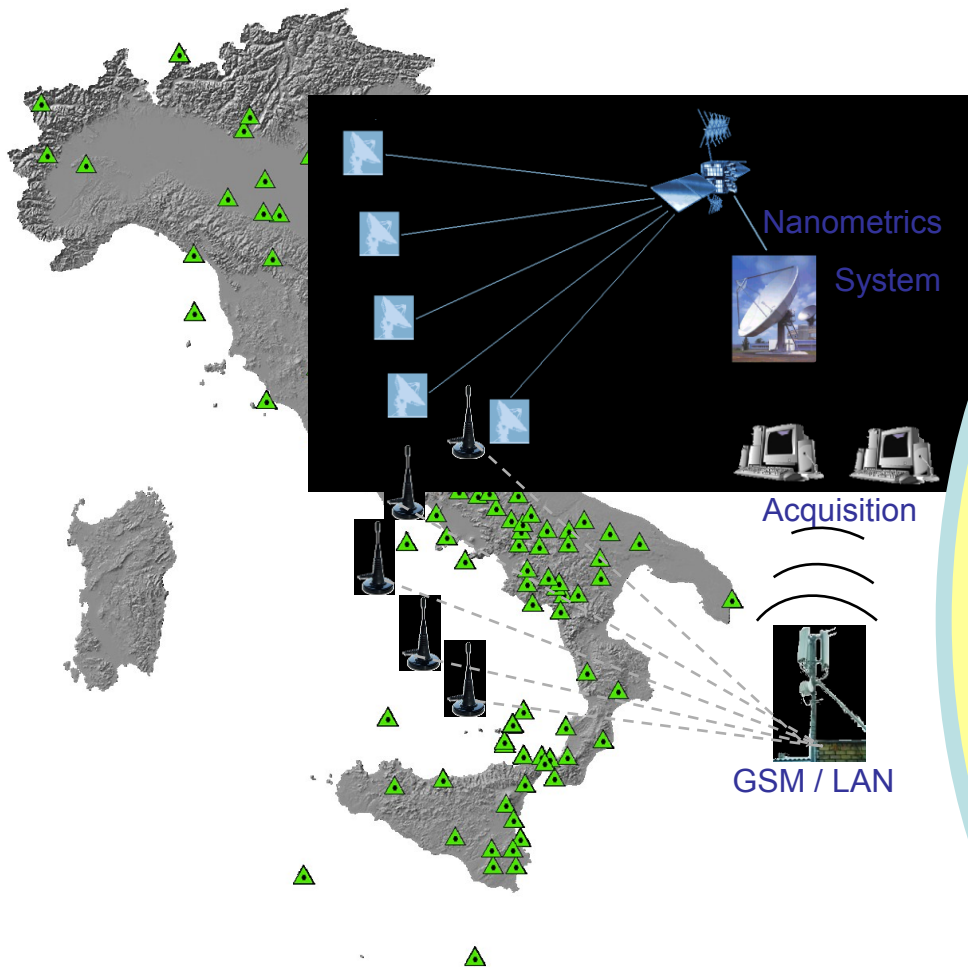
4. Knowledge Presentation Layer

- CLINIC Front-end
- WEB GIS
- The reserved Area



The R.I.N.G.

Rete Integrata Nazionale Gps





Knowledge Management

The aim of KM is to establish an environment in which people are encouraged to create, learn, share and use knowledge together for the benefit of the organization, the people who work in it, and the organization's customers.

An organization's most valuable resource is the knowledge of people who work in it

"The creation and subsequent management of an environment which encourages knowledge to be created, shared, learnt, enhanced, organised and utilized for the benefit of the organisation and its customers." **Abell & Oxbrow, Tfpl Ltd, 2001**

"Knowledge management is a process that emphasises generating, capturing and sharing information know how and integrating these into business practices and decision making for greater organisational benefit." **Maggie Haines, NHS Acting Director of Knowledge Management**

The capability of an organization to create new knowledge, disseminate it throughout the organization, and embody it in products, services and systems. **Nonaka & Takeuchi, 1995.**

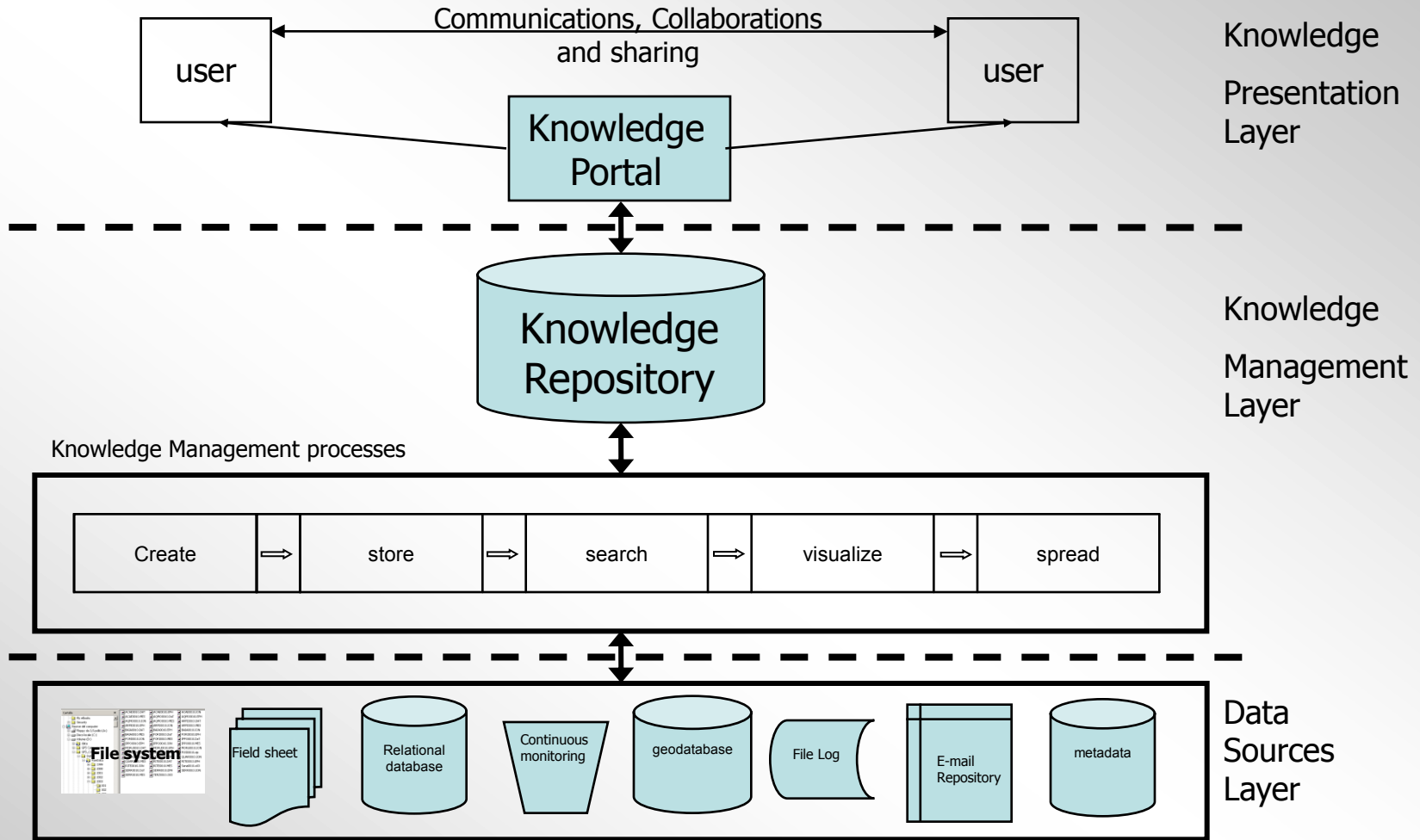
The attempt to recognize what is essentially a human asset buried in the minds of individuals and leverage it into a organizational asset that can be accessed and used by a broader set of individuals on whose decisions the firm depends. Marshall, **Prusak & Shpilburg, 1996.**

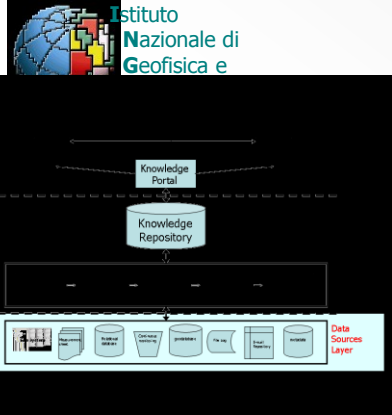
The collection of processes that govern the creation, dissemination and utilization of knowledge. **Newman, 1991.**

The collage features several web interfaces related to knowledge management and digital libraries:

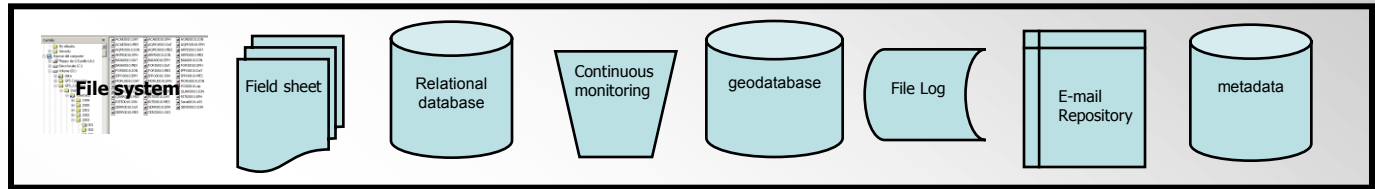
- CERFE**: A logo for the Centre for Earthquake Research and Forecasting.
- earthprints**: A logo for the Earth Sciences Information System.
- UCSF GALEN digital library of UCSF**: A screenshot of the UCSF GALEN website, showing navigation tabs like 'General Services & Info' and 'Education & Technology'.
- The Open University KMi Institute**: A screenshot of the KMi Institute website, featuring a search bar and navigation tabs like 'Home', 'News', 'Projects', 'Technologies', 'Publications', and 'People'.
- David Skyrme associates**: A logo for a consulting firm.
- THE KNOWLEDGE INNOVATION ZONES RESEARCH PROJECT**: A screenshot of a website for a research project, with the URL www.inthekzone.com.
- KMWorld**: A logo for a knowledge management resource.
- CONTENT, DOCUMENT and KNOWLEDGE Management**: A logo for a knowledge management framework.
- RECENT PUBLICATIONS**: A section from a website listing publications such as 'Down on the OCR Farm: How We Produced Searchable PDFs for 7 Million Documents in a Student Computer Lab'.
- DSpace**: A logo for a digital repository.

The KM infrastructure





Data sources layer

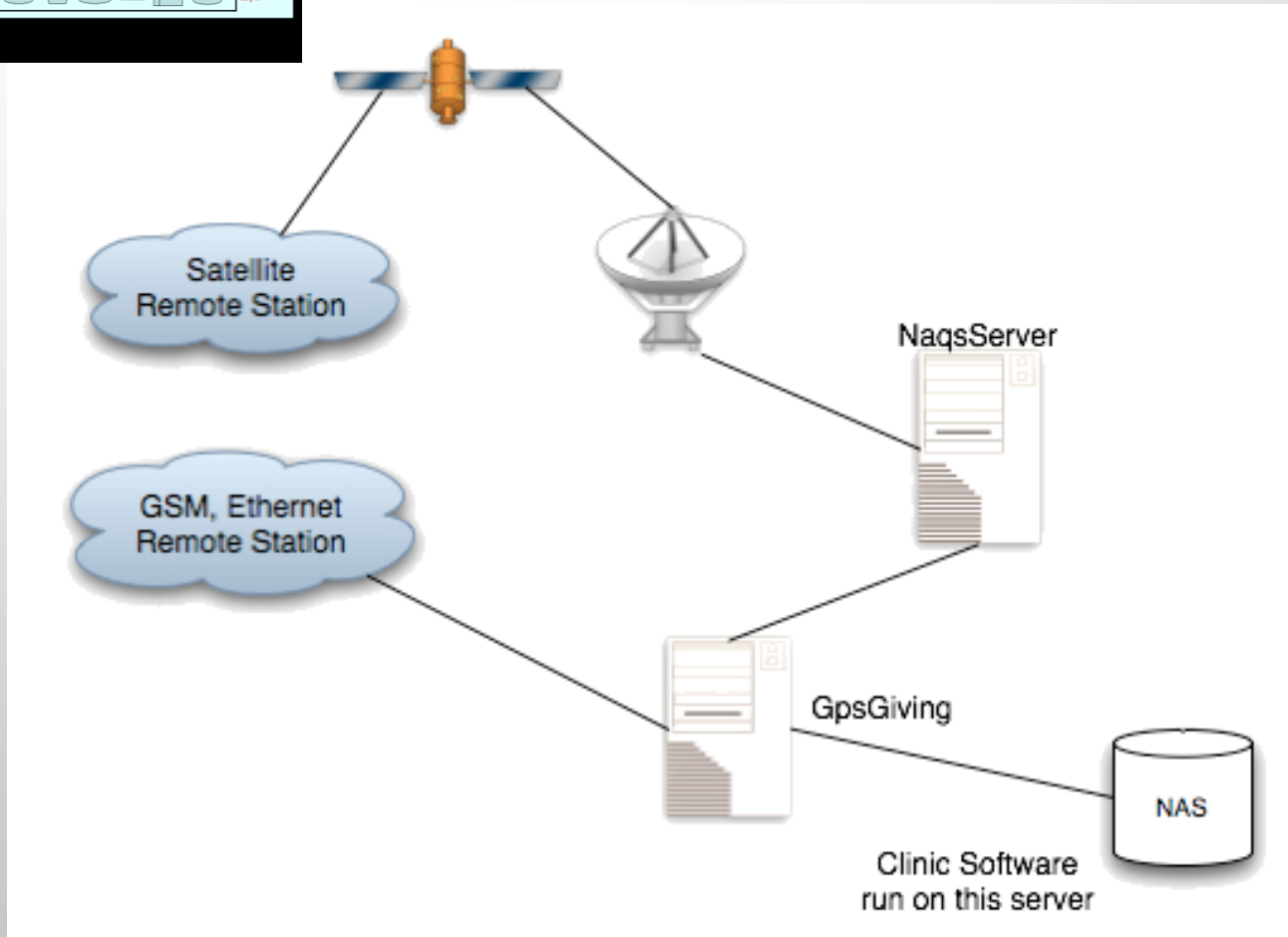
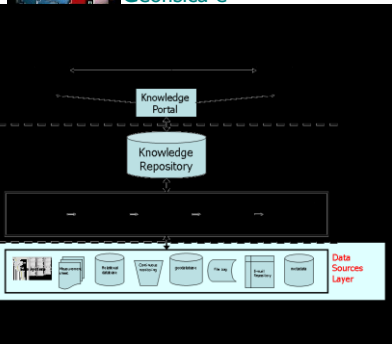


We combine different **Technology of Knowledge Storing (TKS)** :

- **File system** for “**no or semi structured resources**”. For example: the GPS registration file (*raw data* and Rinex file) from which is not possible (or not suited) to extract the informative content
- **relational database** for “**resources to be well structured**”. For example: information about sites and instrument that can be well structured in the database object.
- As file system technology we have GPSGIVING
- As database technology we have Oracle 9i.

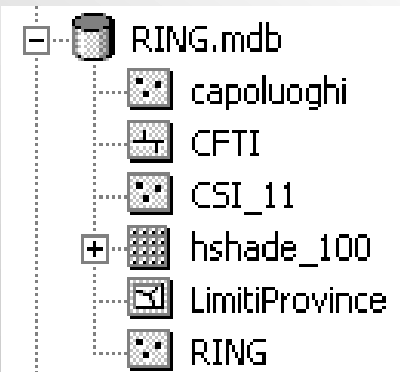
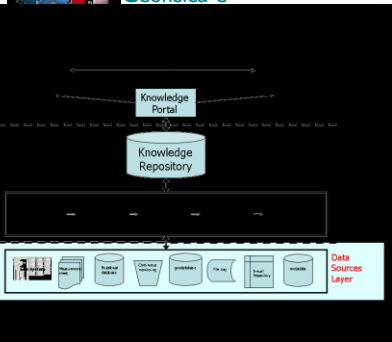
GPSSGiving

EXT3 File System



ous access

Relational Database



ORACLE Database Express Edition

User: INGV

Home > Object Browser

- Tables
- ACTIONS
- AGENCY
- ANAO_RIFERIMENTI
- CLINIC
- CONFIGURAZIONE_GRAFICI
- DEFORMAZIONI
- EVENTS
- FILTERS
- HTMLDB_PLAN_TABLE
- INDIRIZZI
- LOG
- MAGAZZINO_STRUMENTI
- MANUTENZIONE_ALTRI_STRUMENTI
- MANUTENZIONE_ANTENNA
- MANUTENZIONE_RICEVITORE
- PAGINE_GRAFICI
- SESSIONI_IN_CONTINUO
- SESSIONI_MISURA
- SISTEMA_DI_SORVEGLIANZA
- SITI
- STRUMENTI_ANTENNA
- STRUMENTI_RICEVITORE
- STRUMENTI_SISTEMA
- TASKS
- TIPO_DEFORMAZIONE
- USERS
- USERS_ACTIONS

CLINIC

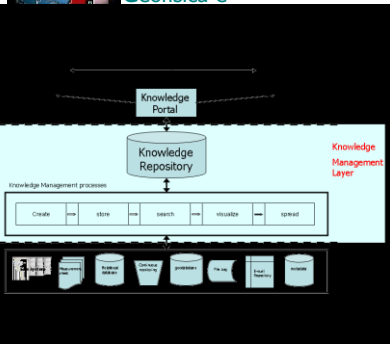
Table Data Indexes Model Constraints Grants Statistics UI Defaults Triggers Dependencies SQL

Query Count Rows Insert Row

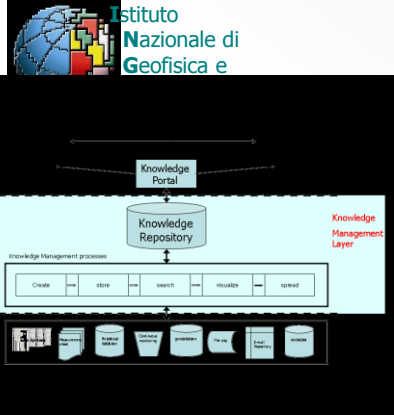
| EDIT | HOME_STAZIONE | DATA_CREAZIONE | ORA_CREAZIONE | AIHO | GIULIANO | PRIMA_EPOCA | ULTIMA_EPOCA | HRS | DT | EXPT | HAVE |
|------|---------------|----------------|---------------|------|----------|----------------|----------------|-------|----|------|-------|
| | VVLO | 26/7/2006 | 12:18 | 04 | 362 | 04 12 27 00.00 | 04 12 27 23.58 | 23.97 | 30 | n/a | 22188 |

Grid of database tables including: INGV_SITI, INGV_CONFIGURAZIONE_GRAFICI, INGV_MAGAZZINO_STRUMENTI, INGV_AGENCY, INGV_SISTEMA_DI_SORVEGLIANZA, INGV_PAGINE_GRAFICI, INGV_INDICI_AZIONI, INGV_SESSIONI_IN_CONTINUO, INGV_MANTENZIONE_ANTENNA, INGV_ANAO_RIFERIMENTI, INGV_SESSIONI_MISURA, INGV_MANTENZIONE_RICEVITORE, INGV_USERS, INGV_USERS_ACTIONS, INGV_STRUMENTI_ANTENNA, INGV_TIPICI_DEFORMAZIONE, INGV_INDIRIZZI, INGV_TIPICI_DEFORMAZIONE, INGV_MANTENZIONE_ALTRI_STRUMENTI, INGV_ACISSIONE, INGV_USERS, INGV_USERS_ACTIONS, INGV_USERS_ACTIONS.

Knowledge Management Layer



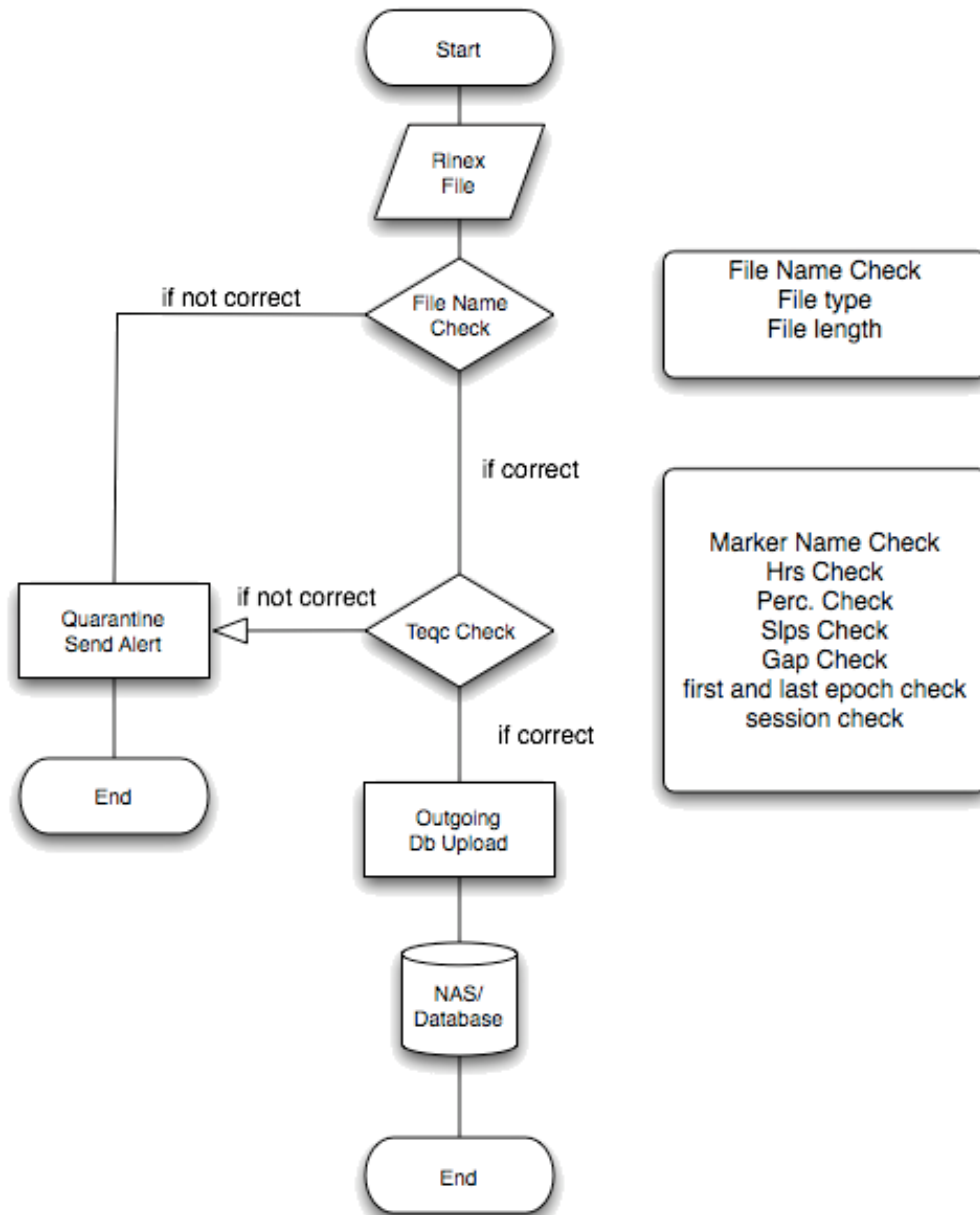
- *data and text mining tools (DMT)*
- Information Porting on database
- *Rawdata solution*
- *Knowledge Discovery*
- *CLINIC*
- Time Series creation and chart
- Simulation software and data analysis



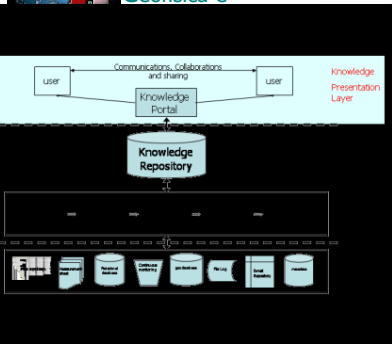
XIII Assembly of Wegener NICE 2006



Clinic Flow Chart



CLINIC Front-End



Clinic Front End

File

Parametri di connessione a BancaDati

HostNameDB: Porta:

Database:

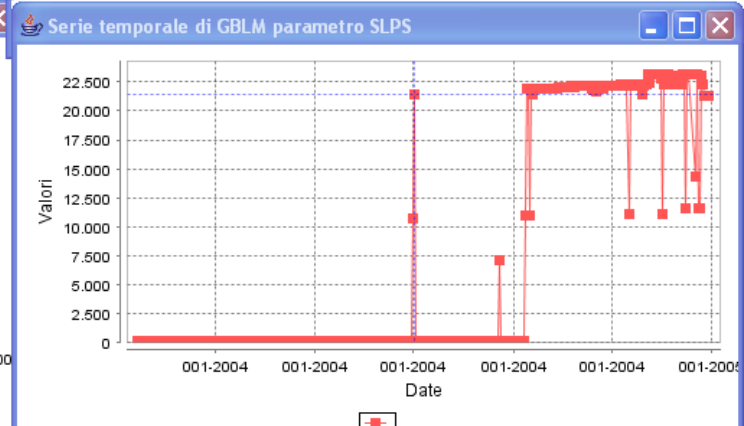
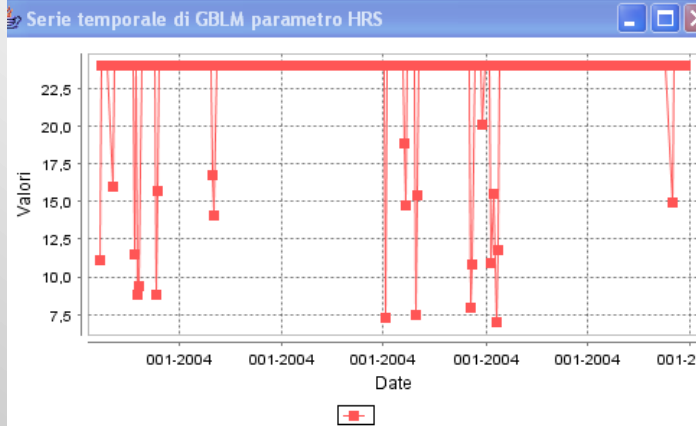
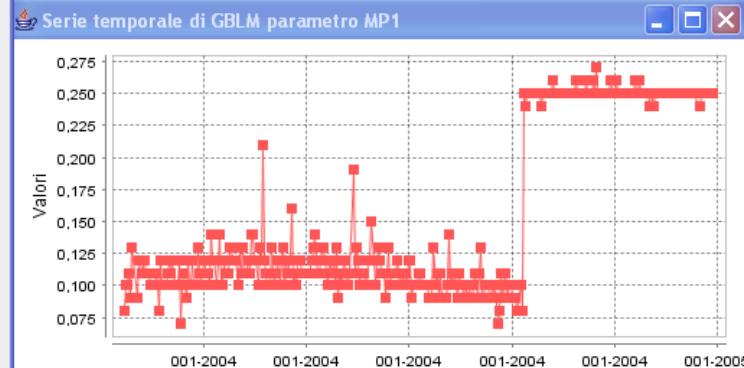
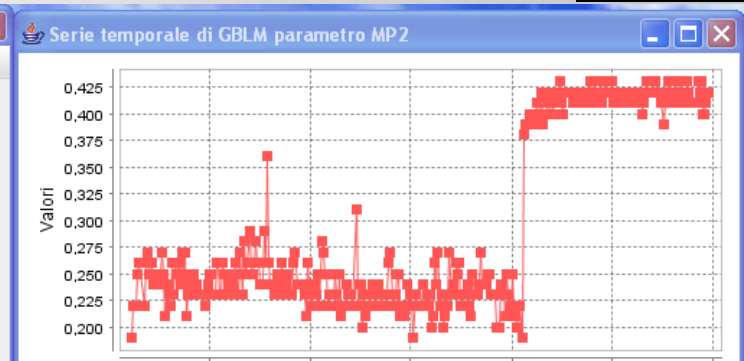
User: Password:

Connesso

Stazioni: Grafico Tipo Grafico:

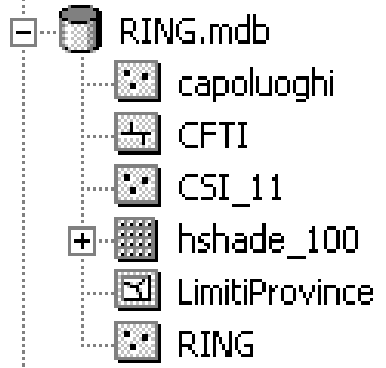
| Nome Stazi... | Data Creazi... | Ora Creazio... | Anno | Giuliano | Prima ep |
|---------------|----------------|----------------|------|----------|-----------|
| RNI2 | 26/7/2006 | 14:56 | 04 | 223 | 04 8 10 1 |
| RNI2 | 26/7/2006 | 14:55 | 04 | 224 | 04 8 11 0 |
| RNI2 | 26/7/2006 | 14:54 | 04 | 225 | 04 8 12 0 |
| RNI2 | 26/7/2006 | 14:53 | 04 | 226 | 04 8 13 0 |
| RNI2 | 26/7/2006 | 14:52 | 04 | 227 | 04 8 14 0 |
| RNI2 | 26/7/2006 | 14:51 | 04 | 228 | 04 8 15 0 |
| RNI2 | 26/7/2006 | 14:50 | 04 | 229 | 04 8 16 0 |
| RNI2 | 26/7/2006 | 14:49 | 04 | 230 | 04 8 17 0 |
| RNI2 | 26/7/2006 | 14:48 | 04 | 231 | 04 8 18 0 |

Autori : Luigi Falco Rocco Cogliano



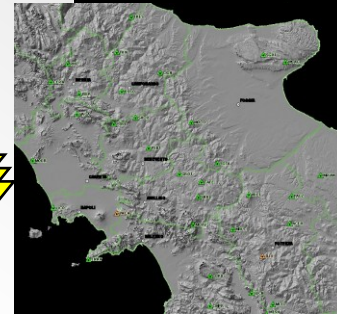
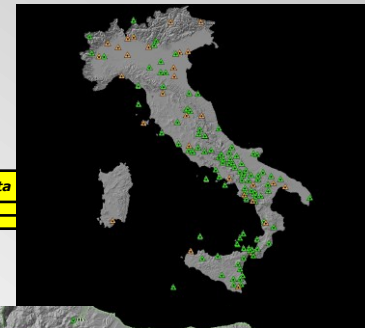


RING GIS

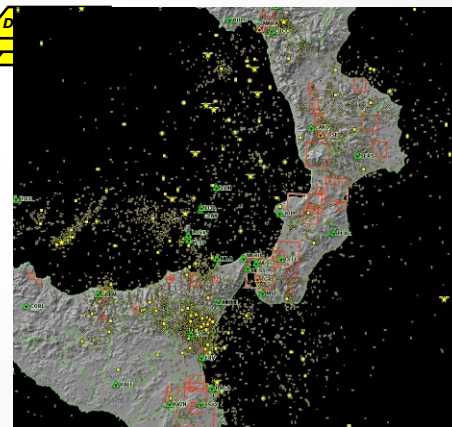
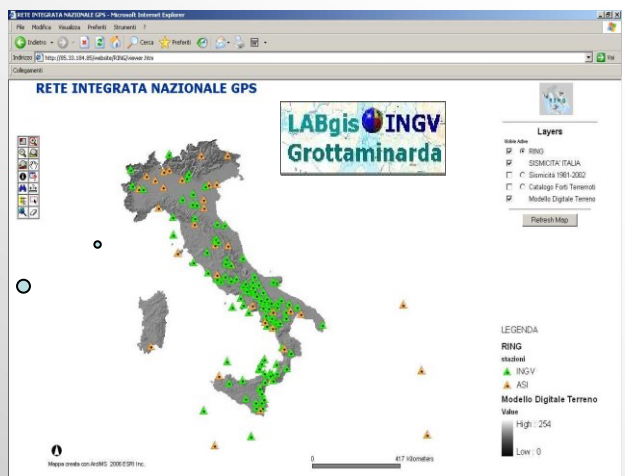
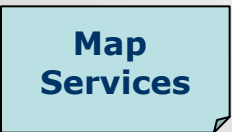


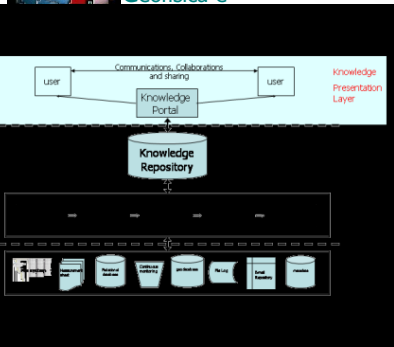
Feature Class

Raster Dataset

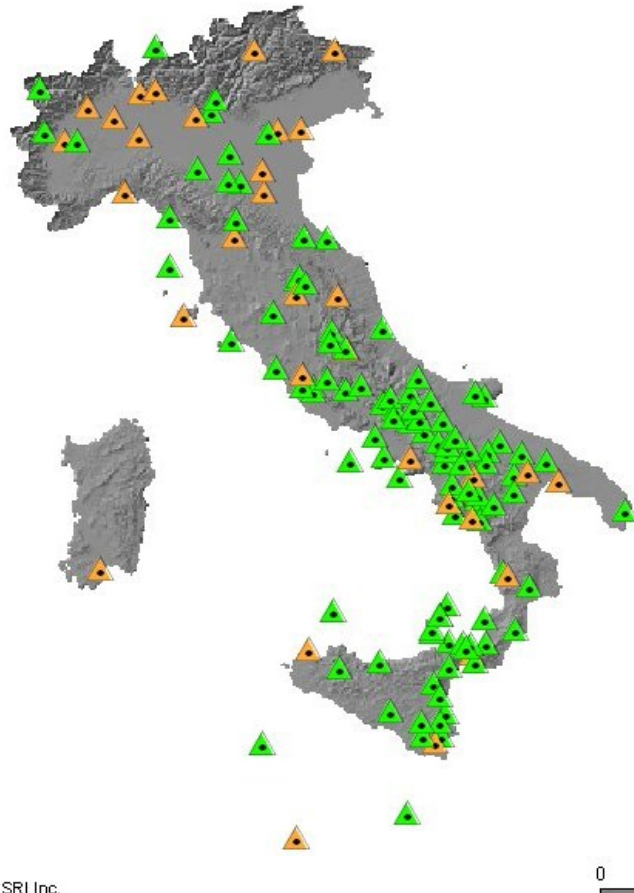


ARCGIS ArcIMS





Web GIS



- Layers**
- Visible Active
- RING
 - SISMICITA' ITALIA
 - Sismicità 1981-2002
 - Catalogo Forti Terremoti
 - Modello Digitale Terreno

Refresh Map

LEGENDA

RING
stazioni

- ▲ INGV
- ▲ ASI

Modello Digitale Terreno
Value

High : 254

Low : 0

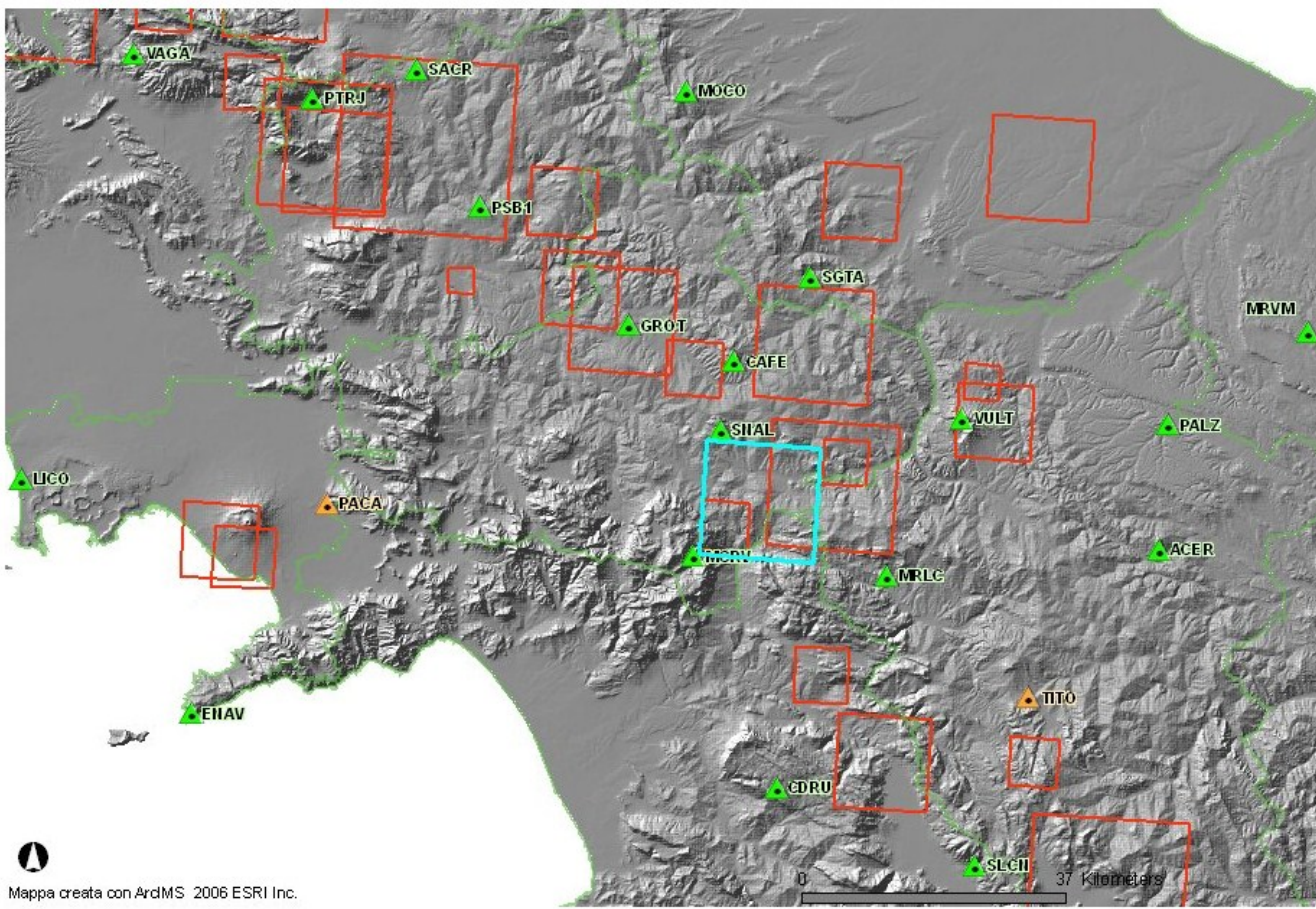
Mappa creata con ArcIMS 2006 ESRI Inc.



RING is now the Active Layer



RETE INTEGRATA NAZIONALE GPS



Mappa creata con ArcIMS 2006 ESRI Inc.

Catalogo Forti Terremoti

| Rec | FID | #SHAPE# | OBJECTID | CFTI_ID | DATE_ | TIME_ | LOCALITY | LAT | LON | INTENSITY | ME | MW | N_DATA | SOURCE_RAD | ID | Shape_Leng |
|-----|-----|---------|----------|---------|------------|----------|--------------------|-------|-------|-----------|-----|----|--------|------------|---------------------|----------------|
| 1 | 315 | [line] | 411 | 411 | 1980-11-23 | 18:34:52 | Irpinia-Basilicata | 40,85 | 15,28 | 10 | 6,7 | 0 | 1395 | 11,35 | 1980-11-23 18:34:52 | 0,670196708349 |

Layers

Visible Active

- RING
- Limiti provinciali
- SISMICITA' ITALIA
- Sismicità 1981-2002
- Catalogo Forti Terremoti
- Modello Digitale Terreno

Refresh Map

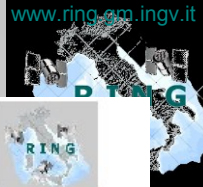
LEGENDA

RING
stazioni

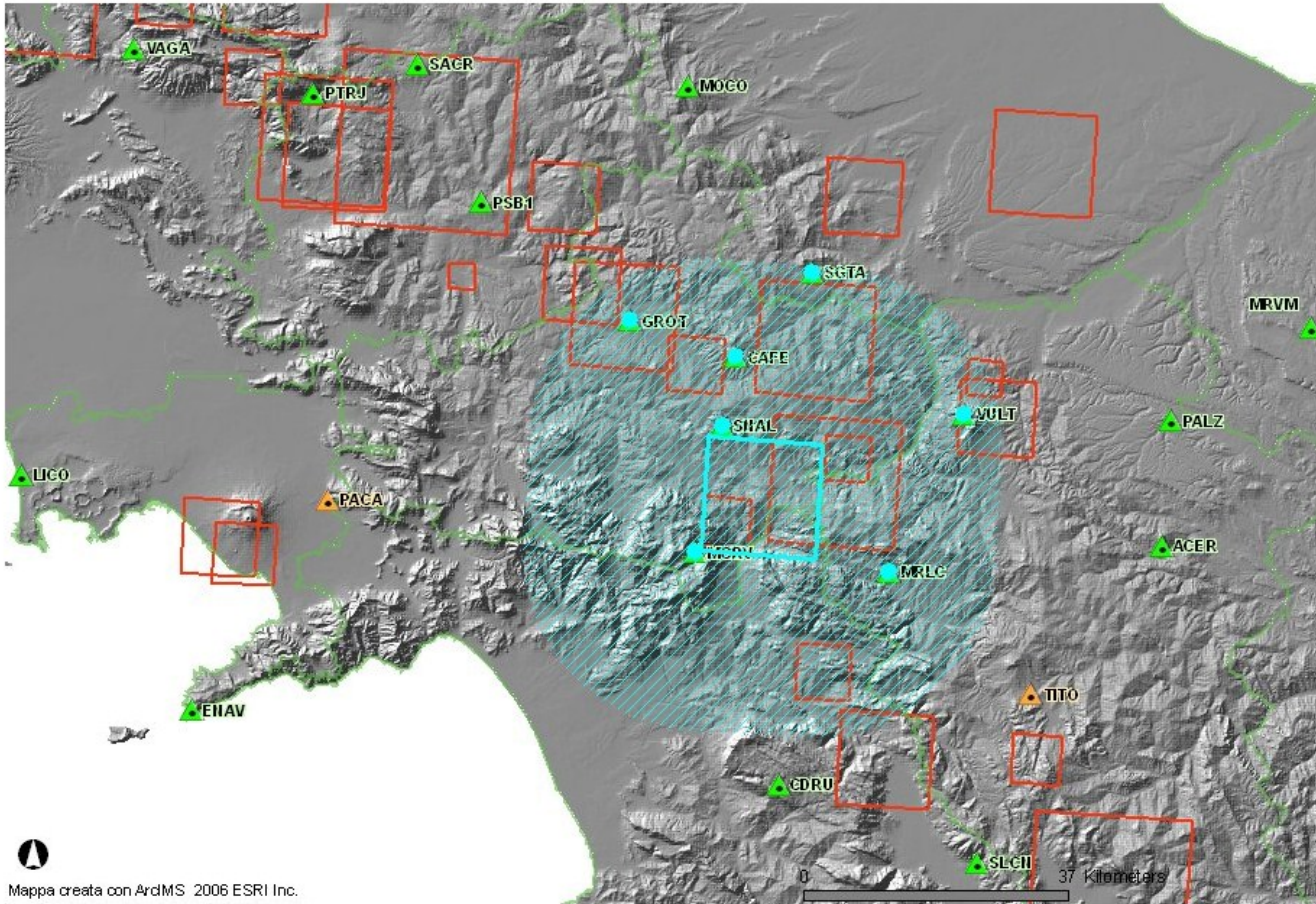
- INGV
- ASI
- Limiti provinciali
- Catalogo Forti Terremoti

Modello Digitale Terreno
Value

High : 254
Low : 0



RETE INTEGRATA NAZIONALE GPS



Layers

Visible Active

- RING
- Limiti provinciali
- SISMICITA' ITALIA
- Sismicità 1981-2002
- Catalogo Forti Terremoti
- Modello Digitale Terreno

Refresh Map

LEGENDA

RING
stazioni
 ▲ ING
 ▲ ASI
 □ Limiti provinciali
 — Catalogo Forti Terremoti

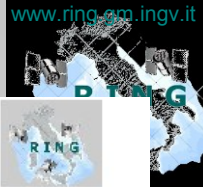
Modello Digitale Terreno
Value
 High : 254
 Low : 0

Mappa creata con ArcIMS 2006 ESRI Inc.

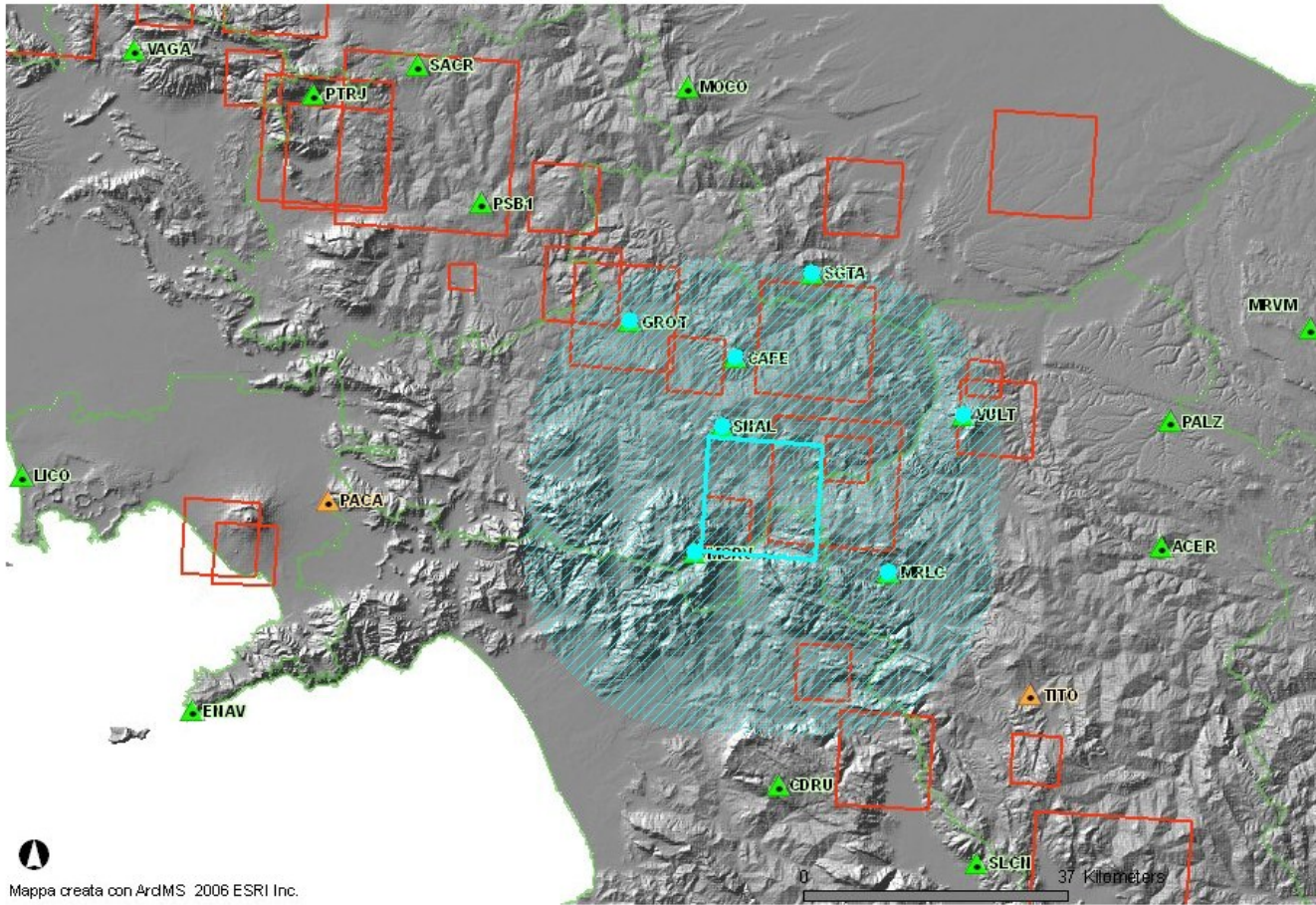
Buffer

Highlight features from **RING** within a distance of **25** KILOMETERS around the selected features of Catalogo Forti Terremoti

Display Attributes



RETE INTEGRATA NAZIONALE GPS



Layers

Visible Active

- RING
- Limiti provinciali
- SISMICITA' ITALIA
- Sismicit  1981-2002
- Catalogo Forti Terrem
- Modello Digitale Terre

Refresh Map

LEGENDA

RING

stazioni

- INGV
- ASI
- Limiti provinciali
- Catalogo Forti Terrem

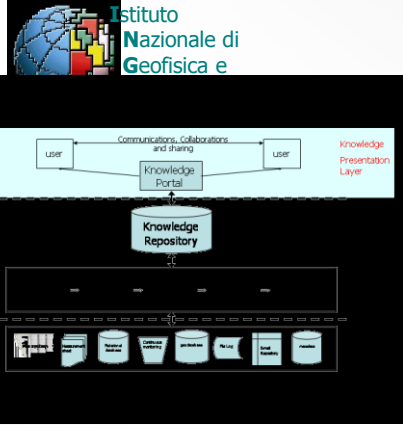
Modello Digitale Terror

Value

High : 254
Low : 0

Mappa creata con ArcIMS 2006 ESRI Inc.

| Rec | FID | #SHAPE# | SIGLA | LAT | LONG | ALT | LOCAL | INSTAL | TIPO_TX | date_inst | Open | STATO | COSTR | TIPO_COSTR | RING_o |
|-----|-----|---------|----------------------|---------|---------|------|-----------------------------------|--------|---------|-----------|------|--------|--------------|------------|--------|
| 1 | 42 | [line] | MCRV | 40,7826 | 15,1684 | 1191 | Monte Cervialto - Calabritto (AV) | GM | SATEL | 2005 | NO | ATTIVA | SUPERFICIALE | TRIPODE | 1 |
| 2 | 48 | [line] | VULT | 40,9549 | 15,6166 | 890 | Monte Vulture - Melfi (PZ) | GM | SATEL | 2005 | NO | ATTIVA | SUPERFICIALE | TRIPODE | 1 |
| 3 | 94 | [line] | GROI | 41,074 | 15,06 | 500 | Grottaminarda | GM | SR232 | 2004 | SI | ATTIVA | SU_EDIFICIO | PALO | 1 |
| 4 | 100 | [line] | SNAL | 40,942 | 15,213 | 1010 | S. Angelo dei Lombar | GM | SATEL | 2004 | NO | ATTIVA | SUPERFICIALE | PILASTRD | 1 |
| 5 | 109 | [line] | MRLC | 40,757 | 15,489 | 0 | Muro Lucano | GM | SATEL | 2004 | SI | ATTIVA | SUPERFICIALE | TRIPODE | 1 |



Reserved area

Rete Integrata Nazionale GPS
Istituto Nazionale di Geofisica e Vulcanologia
(Restricted access area)

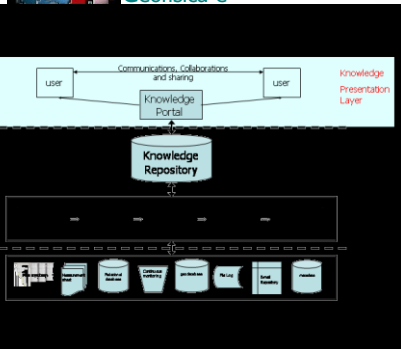
User

Password

This web application uses Sun Java Technology.
If you find problems using these features with your browser please visit our [Notes on Configuration](#) page.

Secure information sharing service

- Only a Browser to access to the service
 - visible Real-Time data
 - web availability of the service
- Controlled access to the data
 - User Filters on sites and rule
 - User Activity log



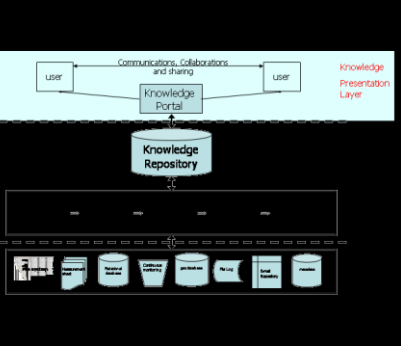
Reserved area

Connected user: admin - Amministratore del sistema

| SITI | LOG update | LOG download | Monograph | Status update | Status | Map |
|------|------------|--------------|-----------|---------------|--------|-----|
| AMUR | LOG update | LOG download | Monograph | Status update | Status | Map |
| BRAS | LOG update | LOG download | Monograph | Status update | Status | Map |
| BSSO | LOG update | LOG download | Monograph | Status update | Status | Map |
| CAFE | LOG update | LOG download | Monograph | Status update | Status | Map |
| CDRU | LOG update | LOG download | Monograph | Status update | Status | Map |
| CELL | LOG update | LOG download | Monograph | Status update | Status | Map |
| CERT | LOG update | LOG download | Monograph | Status update | Status | Map |
| CIGN | LOG update | LOG download | Monograph | Status update | Status | Map |
| CMPR | LOG update | LOG download | Monograph | Status update | Status | Map |
| CORL | LOG update | LOG download | Monograph | Status update | Status | Map |

The Services

1. Generate and download the file Log GPS
2. Manage the site STATUS
3. Generation of monographs
4. Download and upload of raw and Rinex file by http protocol
5. Graph Time Series



Log Update and Log Download

Home Administration File Monitoring Time Series Disclaimer Log Out

Connected user: admin - Amministratore del sistema

| SITI | LOG update | LOG download | Monograph | Status update | Status | Map |
|------|------------|--------------|-----------|---------------|--------|-----|
| AMUR | LOG update | LOG download | Monograph | Status update | Status | Map |
| BRAS | LOG update | LOG download | Monograph | Status update | Status | Map |
| BSSO | LOG update | LOG download | Monograph | Status update | Status | Map |
| CAFE | LOG update | LOG download | Monograph | Status update | Status | Map |
| CDRU | LOG update | LOG download | Monograph | Status update | Status | Map |
| CELL | LOG update | LOG download | Monograph | Status update | Status | Map |
| CERT | LOG update | LOG download | Monograph | Status update | Status | Map |
| CIGN | LOG update | LOG download | Monograph | Status update | Status | Map |
| CMPR | LOG update | LOG download | Monograph | Status update | Status | Map |
| CORL | LOG update | LOG download | Monograph | Status update | Status | Map |

LOG Update

input and modify the information required to complete the Station Log File

Log Download

compile run time the Log file and to download it in text file type

Home Administration File Monitoring Time Series Disclaimer Log Out

SITE AMUR

- Form
- Site Identification of the GNSS Monument
- Site Location Information
- GNSS Receiver Information
- GNSS Antenna Information
- Meteorological Instrumentation
- Local Episodic Effects Possibly Affecting Data Quality
- On-Site, Point of Contact Agency Information
- Responsible Agency (if different from 11.)

Sezione: 2

City or Town:

State or Province:

Country:

Approximate Position (ITRF)
X coordinate (m):

Approximate Position (ITRF)
Y coordinate (m):

Approximate Position (ITRF)
Z coordinate (m):

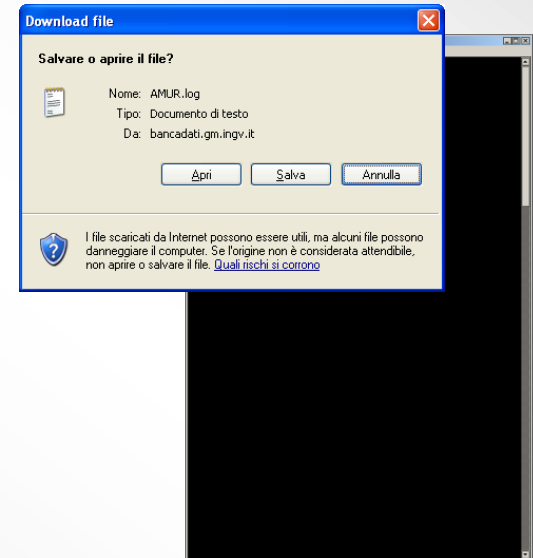
Approximate Position (ITRF)
Latitude (N is +):

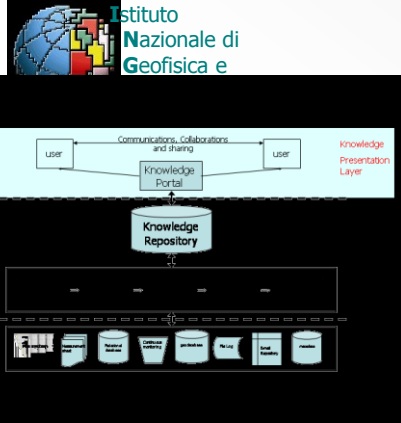
Approximate Position (ITRF)
Longitude (E is +):

Approximate Position (ITRF)
Elevation (m, ellips.):

Additional Information:

Version 3.0 (last update 05/05/2006) - WebMaster





Status

- schedule a task for each site
- task may be a maintenance, or instrumentation upgrade, or a simple site inspection
- working list for the technician
- the list of the finished tasks represents the problem Log of the site

[Home](#) | [Administration](#) | [File](#) | [Monitoring](#) | [Time Series](#) | [Disclaimer](#) | [Log Out](#)

SITE MSAG

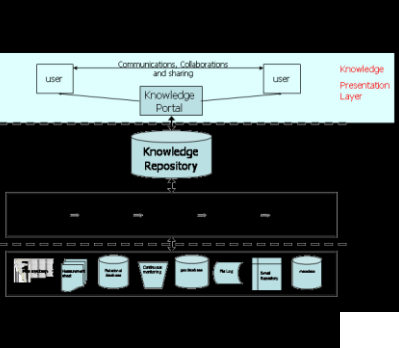
ACTIVE TASKS

| Date | Problem | End Date | Solution |
|------------|--------------------------------------|----------|----------|
| 30/05/2006 | sostituire pannello informativo INGV | | |

END TASKS

| Date | Problem | End Date | Solution |
|------------|--|----------|----------|
| 23/05/2006 | installazione stazione satellitare su Hellasat; gettare polvere anti-formiche; gettare cibo anti-topi; annotare tutti i numeri | | chiuso |
| 23/05/2006 | contattare i carabinieri x visita sul sito oppure portare loro foto stazione montata | | chiuso |

Download / upload



Home Administration File Monitoring Time Series Disclaimer Log Out

Statistics

Monthly statistics

Year = 2005
Month = Dec
Percentage = 80

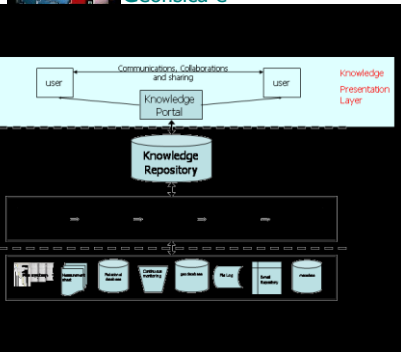
(Date format: dd/mm/yyyy) Download Download file and execute: "ftp -A -s:download.log"

- amur
- bras
- bssm
- cadm
- cafe
- cdru
- cell
- cign
- cmpr
- cpan
- cucc
- eiiv
- enav
- esln
- fres
- gblm
- grog
- grot
- hmdc

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | |
|-------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|
| | Thu | Fri | Sat | Sun | Mon | Tue | Wed | Thu | Fri | Sat | Sun | Mon | Tue | Wed | Thu | Fri | Sat | Sun | Mon | Tue | Wed | Thu | Fri | Sat | Sun | Mon | Tue | Wed | Thu | Fri | Sat | |
| <input type="checkbox"/> amur | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 97 | 99 | 100 | 100 | 100 | 100 | 100 | 100 | |
| <input type="checkbox"/> bras | 98 | 97 | 97 | 97 | 97 | 97 | 97 | 97 | 97 | 97 | 97 | 98 | 97 | 97 | 97 | 97 | 97 | 97 | 98 | 98 | 98 | 97 | 97 | 95 | 97 | 97 | 98 | 98 | 98 | 98 | 98 | |
| <input type="checkbox"/> bssm | 98 | 98 | 98 | 98 | 98 | 98 | 98 | 98 | 98 | 98 | 98 | 98 | 98 | 98 | 98 | 98 | 98 | 99 | 98 | 98 | 98 | 98 | 98 | 98 | 98 | 93 | 98 | 98 | 98 | 98 | 98 | |
| <input type="checkbox"/> cafe | 94 | 94 | 95 | 94 | 95 | 95 | 94 | 92 | 95 | 94 | 94 | 94 | 96 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 96 | 95 | 94 | 90 | 92 | 94 | 94 | 94 | 93 | 94 | 95 | |
| <input type="checkbox"/> cell | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 85 | 86 | | 89 | 89 | 89 | 89 | 87 | 89 | 90 | 90 | 90 | | 90 | | |
| <input type="checkbox"/> cign | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 89 | 91 | 92 | 92 | 92 | | 92 | | |
| <input type="checkbox"/> cmpr | 99 | 99 | 99 | 99 | 99 | 99 | 99 | 99 | 99 | 99 | 99 | 99 | 99 | 99 | 99 | 99 | 99 | 99 | 99 | 99 | 99 | 99 | 99 | 96 | 99 | 99 | 99 | 99 | 98 | 99 | 99 | |
| <input type="checkbox"/> cpan | 93 | 91 | 93 | 93 | 93 | 93 | 93 | 93 | 93 | 93 | 93 | | 96 | 94 | 94 | | | | | | 94 | 93 | | 92 | 92 | 93 | 94 | 94 | 94 | 94 | | |
| <input type="checkbox"/> cucc | 93 | 94 | 94 | 94 | 94 | 94 | 94 | 94 | 94 | 94 | 94 | 94 | 94 | 94 | 94 | | | | | 95 | 95 | 95 | 95 | 95 | 93 | 95 | 95 | 95 | 95 | 95 | | |
| <input type="checkbox"/> eiiv | 94 | 99 | 99 | 96 | 100 | | | | | 100 | 96 | 100 | 100 | 100 | | | | | | | | 100 | 100 | 98 | 100 | 99 | 100 | 100 | | 100 | | |
| <input type="checkbox"/> esln | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 91 | 89 | 90 | 89 | 90 | | | | | | | | | | 92 | 93 | 92 | 91 | 90 | 82 | 90 | 90 | 82 | 92 | 91 |
| <input type="checkbox"/> fres | 97 | 97 | 97 | 97 | 97 | 97 | 97 | 97 | 97 | 97 | 97 | 97 | 97 | 97 | | | | | | | | 97 | 97 | 94 | 96 | 97 | 97 | 97 | 97 | 97 | 97 | |
| <input type="checkbox"/> gblm | 93 | 93 | 93 | 93 | 93 | 94 | 93 | 93 | 93 | 93 | 93 | 93 | 93 | 93 | 93 | 94 | 93 | 94 | 94 | 94 | 92 | 94 | 93 | 93 | 91 | 93 | 93 | 93 | 93 | 93 | 96 | |
| <input type="checkbox"/> grog | 97 | 97 | 87 | 97 | 91 | | 97 | | | | | | | | | | | | | 97 | 97 | 97 | 96 | 97 | 94 | 96 | 97 | 96 | 97 | 97 | 97 | |
| <input type="checkbox"/> grot | 99 | 98 | 99 | 99 | 99 | 99 | 99 | 99 | 99 | 99 | 99 | 99 | 99 | 99 | 99 | 99 | 97 | | | | | | | 97 | 99 | 99 | 99 | 99 | 99 | 99 | 99 | |
| <input type="checkbox"/> hmdc | 93 | 96 | 96 | 95 | 94 | 96 | 94 | 94 | 95 | 96 | 96 | 95 | 96 | 96 | 96 | 94 | 90 | 96 | 96 | 96 | 96 | 96 | 94 | 91 | 96 | 96 | 96 | 96 | 96 | 92 | 95 | |
| <input type="checkbox"/> hvzn | 100 | 100 | 100 | 98 | 97 | 100 | 100 | 99 | 100 | 95 | 100 | 100 | 99 | 100 | 98 | 99 | 100 | 100 | 100 | 100 | 100 | | 97 | 97 | 97 | 100 | 97 | 100 | 100 | 98 | | |
| <input type="checkbox"/> ingp | 100 | 100 | 100 | 100 | 100 | 100 | 97 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | | | | | 100 | 100 | 100 | 97 | 99 | 100 | 100 | 100 | 100 | 97 | | |
| <input type="checkbox"/> lasp | 99 | 111 | 110 | 99 | 110 | 111 | 111 | 111 | 112 | 112 | 112 | 113 | 99 | 114 | 114 | 115 | 114 | 115 | 115 | 116 | 111 | 112 | 112 | 110 | 112 | 114 | 114 | 99 | 99 | 111 | 99 | |
| <input type="checkbox"/> maon | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 99 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 98 | 99 | 100 | 100 | 100 | 100 | 100 | 100 | |
| <input type="checkbox"/> mcrv | 98 | 98 | 98 | 98 | 98 | 98 | 98 | 98 | 98 | 98 | 98 | 98 | 98 | 98 | 98 | 98 | 98 | 98 | 98 | 98 | 98 | 98 | 98 | 94 | 98 | 98 | 95 | 98 | 98 | 98 | 98 | |
| <input type="checkbox"/> mila | 99 | 98 | 98 | 98 | 99 | 99 | 98 | 99 | 98 | 99 | 99 | 98 | 98 | 98 | 98 | | | | | | | | | | | | | | | 98 | 98 | |
| <input type="checkbox"/> mmme | 100 | 100 | 100 | 100 | 100 | 100 | 99 | 99 | 98 | 100 | 100 | 97 | | 99 | 99 | 81 | 97 | 100 | 93 | 100 | 99 | 99 | 99 | 96 | 99 | 99 | 100 | 97 | 100 | 99 | 99 | |

YEAR 2006
FMAMJJASOND

Monographs



- Generate and download of file GPS Monographs
- Manage the site Information
- Generation of monographs

Monografia: AMUR

foto 1:




foto 2:



| | | | |
|------------------------|----------------|----------------|------------|
| Place: | Altamura | X UTMED50: | 1145333 |
| Ownership: | | Y UTMED50: | 455777 |
| Latitude: | +405426.13993 | Phone: | |
| Longitude: | +0163614.53874 | Date building: | 11/08/2005 |
| Accessibility: | | | |
| How to reach the site: | | | |
| Notes: | | | |

Download file

Salvare o aprire il file?

Nome: AMUR.pdf

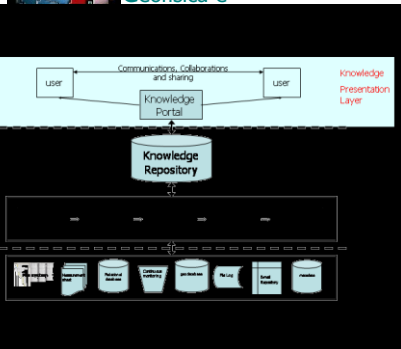
Tipo: Adobe Acrobat 7.0 Document

Da: bancadati.gm.ingv.it

I file scaricati da Internet possono essere utili, ma alcuni file possono danneggiare il computer. Se l'origine non è considerata attendibile, non aprire o salvare il file. [Quali rischi si corrono](#)



Graph section



File Monitoring Time Series Disclaimer Log Out

Field Title (*)

Metodologia (*)

Sito (*)

Campo (*) Operatore

Range Ordinate min max (Utilizzare il punto come separatore)

Range Ascisse (Data) min max (dd/mm/yyyy hh:mm:ss)

Label Ascissa

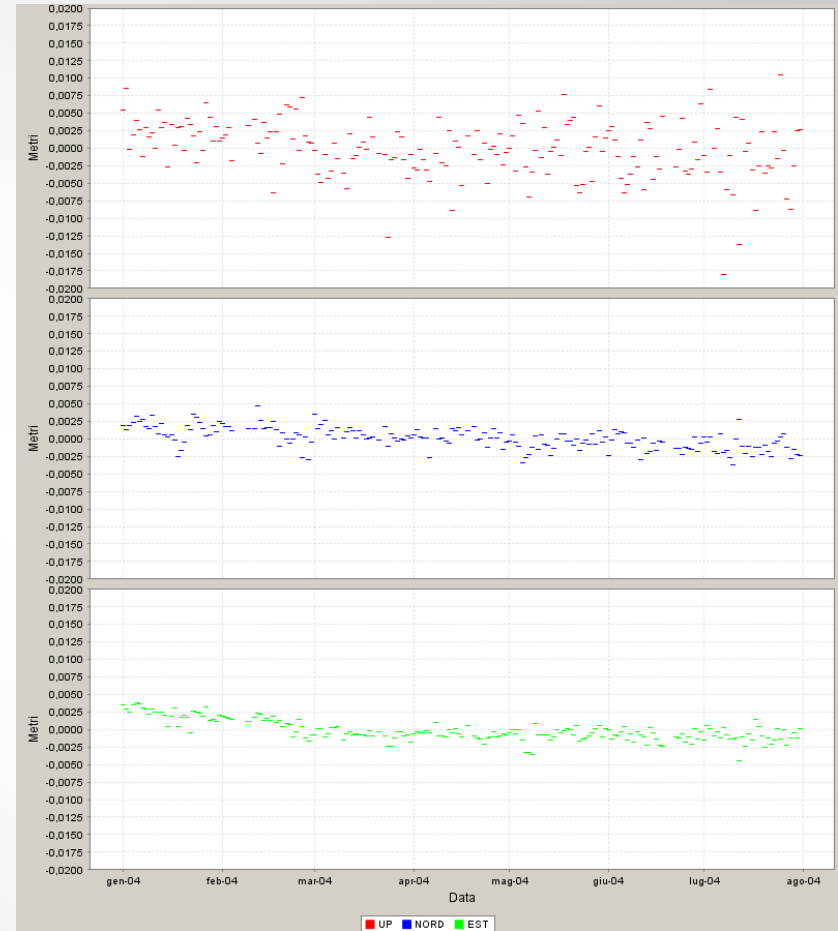
Label Ordinate

Tipo Grafico

Campionamento Valori Secondi Minuti Ora Giorno

Version 3.0 (Last update 05/05/2006) - WebMaster

- Time series chart of CGPS solution;
- Accesso solo alle metodologie non filtrate;
- Grafici sempre aggiornati con impostazione del tempo di refresh.





After 1 year...

- The KM infrastructure allowed us to manage most of the knowledge in our working group.
- We developed tools for checking and storing the data and the data information
- We maintain active the web services
 - Clinic Front-End
 - WebGIS
 - Reserved Area

Future developments

- Complete Databases integration (GIS and metadata)
- Insertion of the data (File System) in to the Relational Database
- Development of a new data processing software