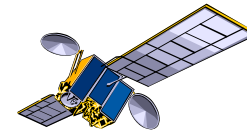


# Graphical Interference Management System

## (GIMS)

Hanane Naciri

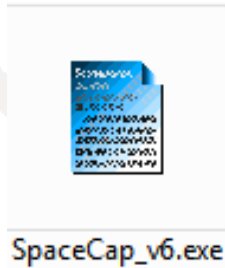
**RRS 2013, Tunisia**



# Introduction

## Appendix 4 Data – GSO Satellites

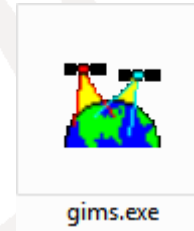
### Alphanumerical Data



### SNS-format DB



### Graphical Data



- Gain contours
- Service Area
- Gain vs. GSO

- Query
- Capture
- PFD Tools



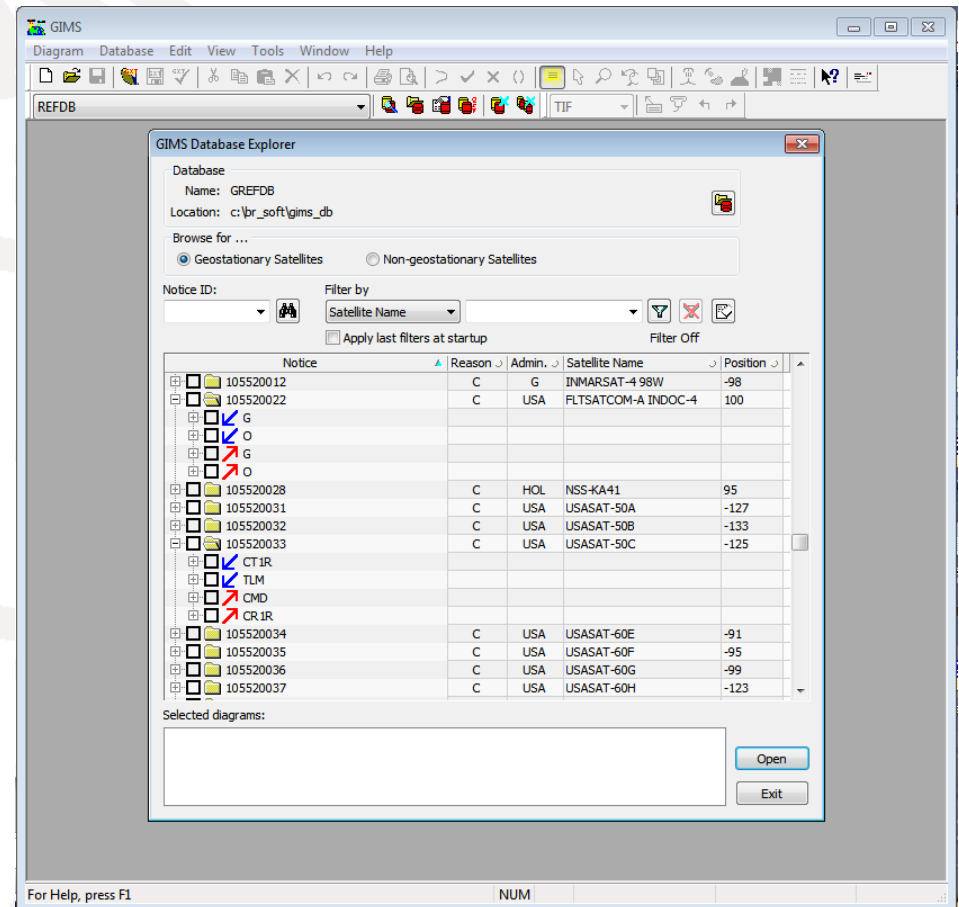
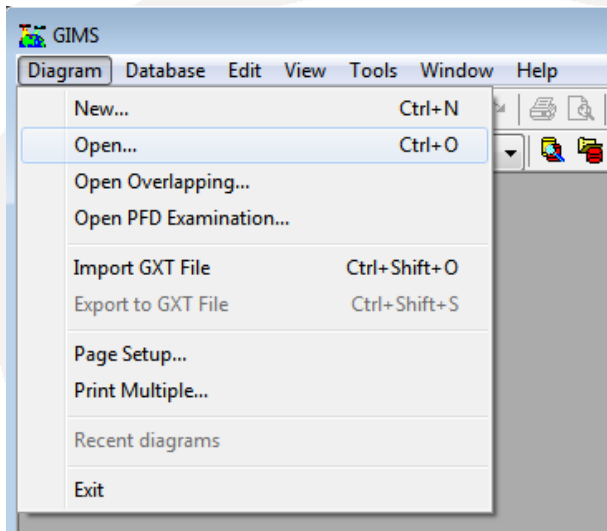
### GIMS DB







# Database Explorer



- Browser
- Export, Clone
- Move to new position



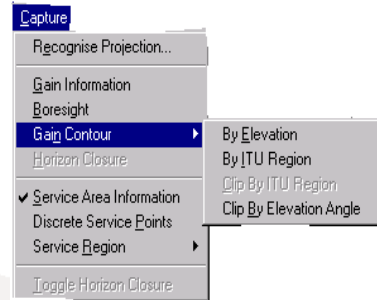
# Capture

"Drawing" on Paper

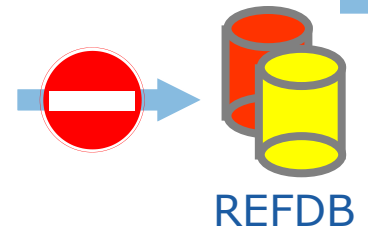
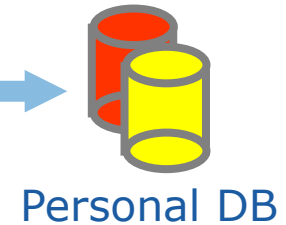
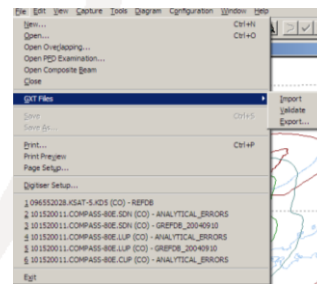
Digitizer



"Simple" diagrams e.g.: global beams  
Elliptical beams

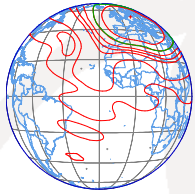


GXT File





# GXT or not GXT ?

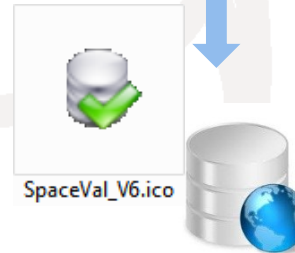
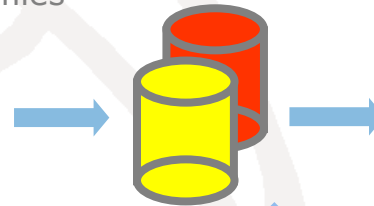
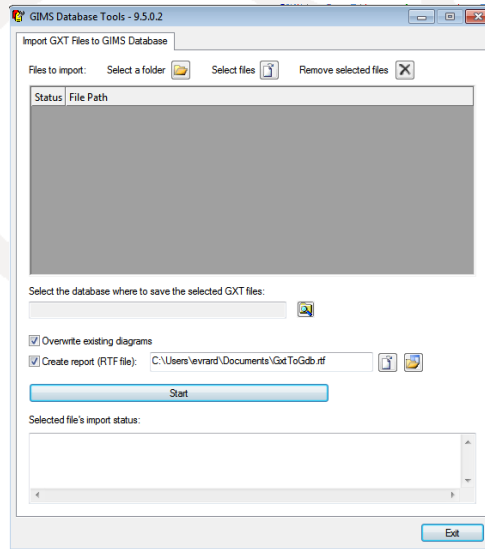
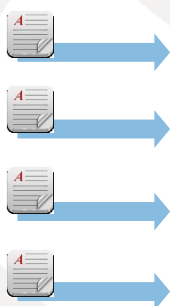


Database | Tools | Import multiple GXT files

```

1 [FormatInfo]
2 format_ver=2
3 [GeoMain]
4 ntc_id=98520054
5 adm=BEL
6 sat_name=SATCOM-4/20.2W
7 long_nom=-20.20
8 n_diag=2
9 [SAHeader]
10 beam_id=EUR
11 emi_rcp=E
12 reason=C
13 srv_area=4DB
14 area_no=1
15 n_rgn=1
16 [SR1]
17 rgn_name=4DB
18 discrete=N
19 n_point=104
20 p1=-28.1201,69.8148
21 p2=-28.0881,67.8411
22 p3=-27.7953,66.0030
23 p4=-27.6340,64.1629
24 p5=-27.3390,62.1934

```



SRS



January 1<sup>st</sup>, 2013

GXT File Format in Preface



# Interactive Interference Tools

## ■ Gain Interpolation

- Click on map
- Enter coordinates

## ■ PFD Examination

- One emission (vs. all emissions with GIBC)
- Article 21, Appendix 30 & 30B
- Visualize excess area
- List of affected countries



# GIMS Libraries

- **Gimapi32.dll**
  - Browse REFDB
  - Browse personal DBs
  - Import/Export GXT files
  - Save into personal DBs
  
- **Shapedbm.dll**
  - Calculate gain
  
- **On IFIC DVD**
  - Documentation
  - Code samples
  
- **Works from most languages on Windows**
  - C, C++, Fortran, Visual Basic, C#...
  
- **32-bit only**





# Links

- <http://www.itu.int/en/ITU-R/software/Pages/gims.aspx>
  - Download software
  - Tutorial
  
- Need help ?
  - [brsas@itu.int](mailto:brsas@itu.int)