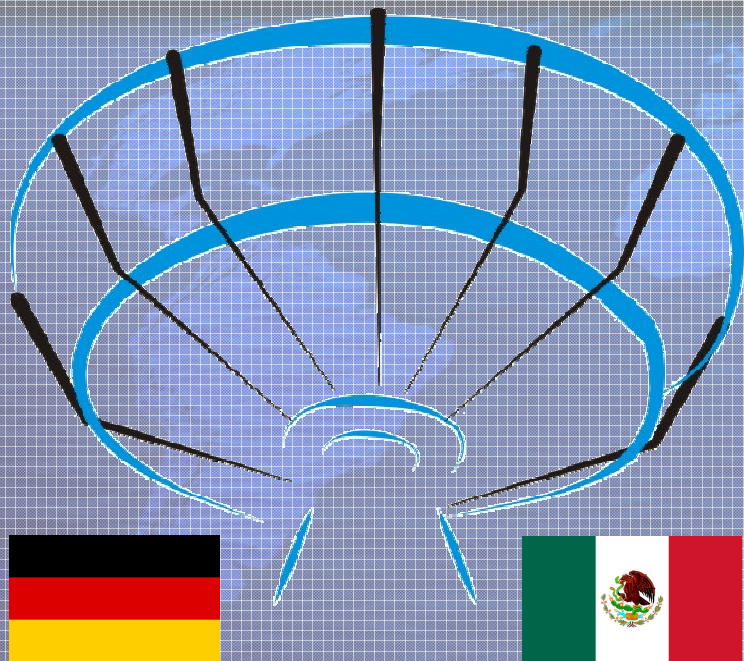


**Workshop: Use of Remote Sensing Data for
Environmental and Civil Security Applications in Mexico**



ERIS
Chetumal

Estación para la Recepción de Información Satelital

Status of Antenna Operation

Azael de la Cruz Peraza, Antenna Operator
April 23, 2008

Contents

- ❖ General Status
- ❖ Local Team in Chetumal
- ❖ Activities / Areas
- ❖ Passes, Orbits
- ❖ Statistics
- ❖ Learning
- ❖ Special Procedures



General Status

❖ Team

- Mexican team composed by 3 colleagues.
- Working in the project since March, 2007.
- Rolls: 2 Shifts a day (Night and Day) since July, 2007.
- Shift role change every 2 months.



❖ Job

- Acquiring 3 Satellite signals.
- Permanent communication with DLR technical team.
- Good quality of Landsat 5 Products (USGS).
- Good quality of ERS2 LBR Products (DLR).

Local Team in Chetumal

- ❖ Profiles needed: IT Specialist, Telecommunications Sp. & Electronics Sp.
- ❖ Graduate, Specialists in their areas, Advance level of spoken English, etc.
- ❖ Pre-selection made by INEGI Authorities in Chetumal.
- ❖ Final selection made in Chetumal, supporting DLR/Conabio decisions.

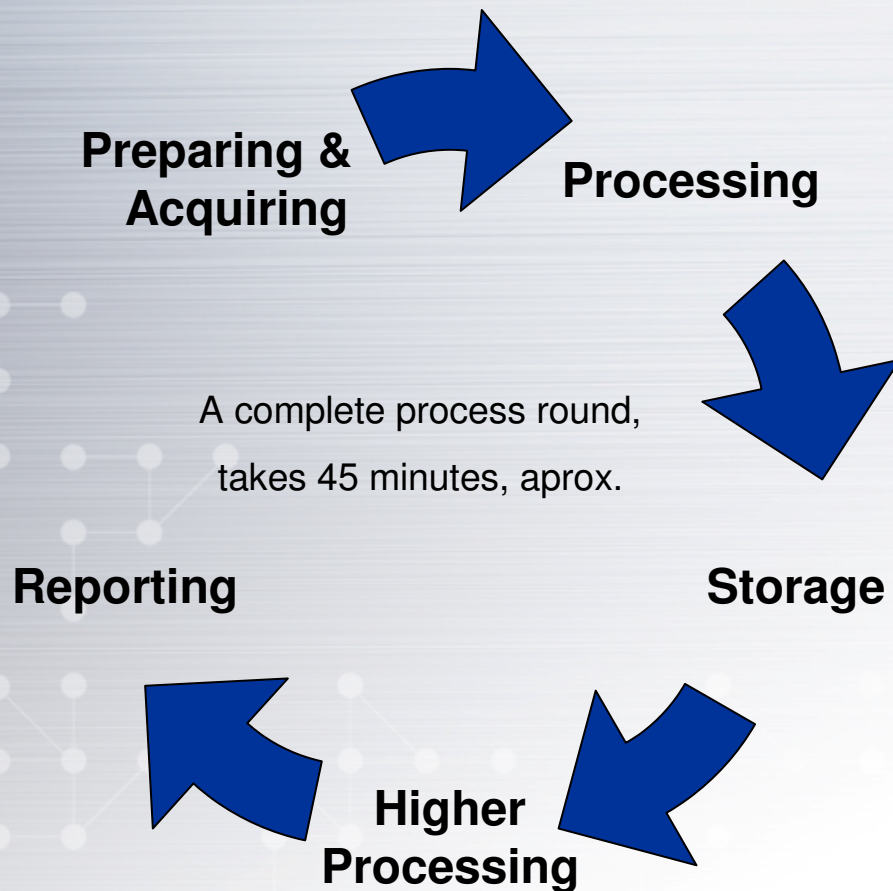
Result of the Selection

- ❖ Edward May, Electronics Specialist, *Night Shift*
- ❖ Azael de la Cruz, IT Specialist, *Day Shift*
- ❖ Christian Gomez, Telecommunications Specialist, *Day Shift*



Description of Activities

General



Others

- **Plausible Customers/Users Attention**
- **Guided Visits**
- **Apply orders from Agencies (ESA, etc)**
- **Maintaining of devices & antenna**
- **Sending / Receive packages**
- **Support to DLR technical activities**

Specific Activities (Areas)

IT

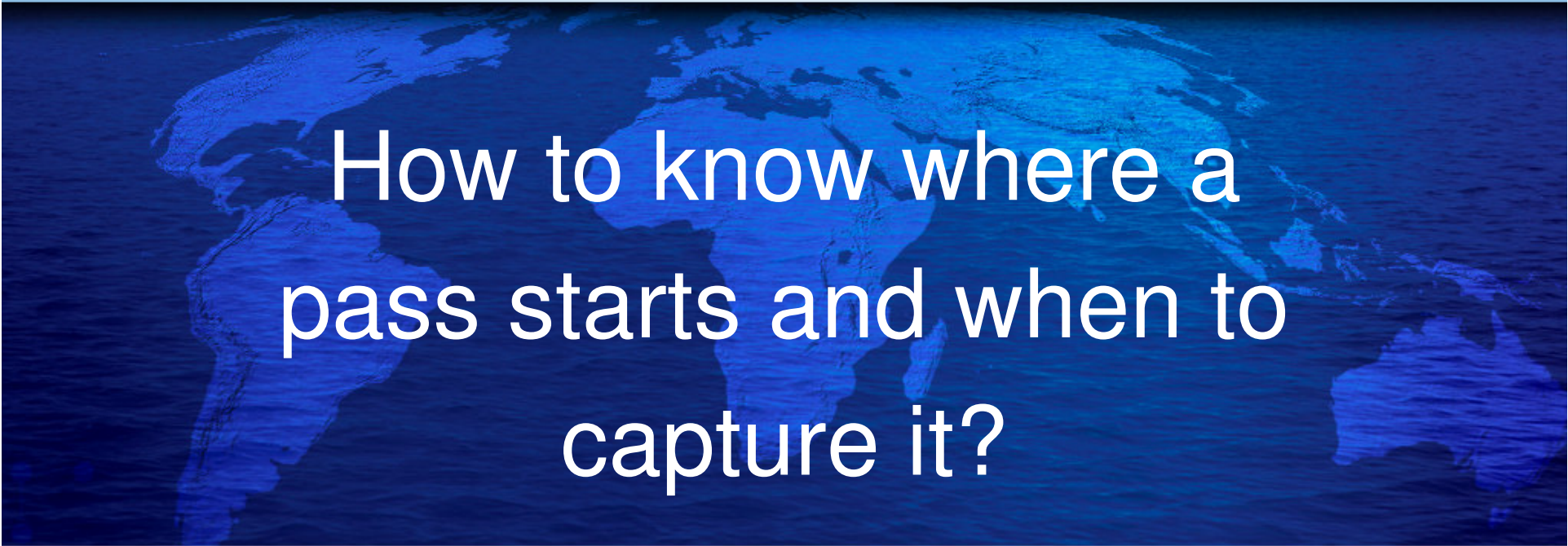
- Verify Software appliances.
- Keep alive connections with Internet 1 and 2.
- Monitoring the correct storing of processed products.
- Keep Data/Voice channels.

Electronic

- Maintenance of Antenna / Antenna Pedestal, before and after acquiring
- Cleaning of parts of Antenna

Telecommunications

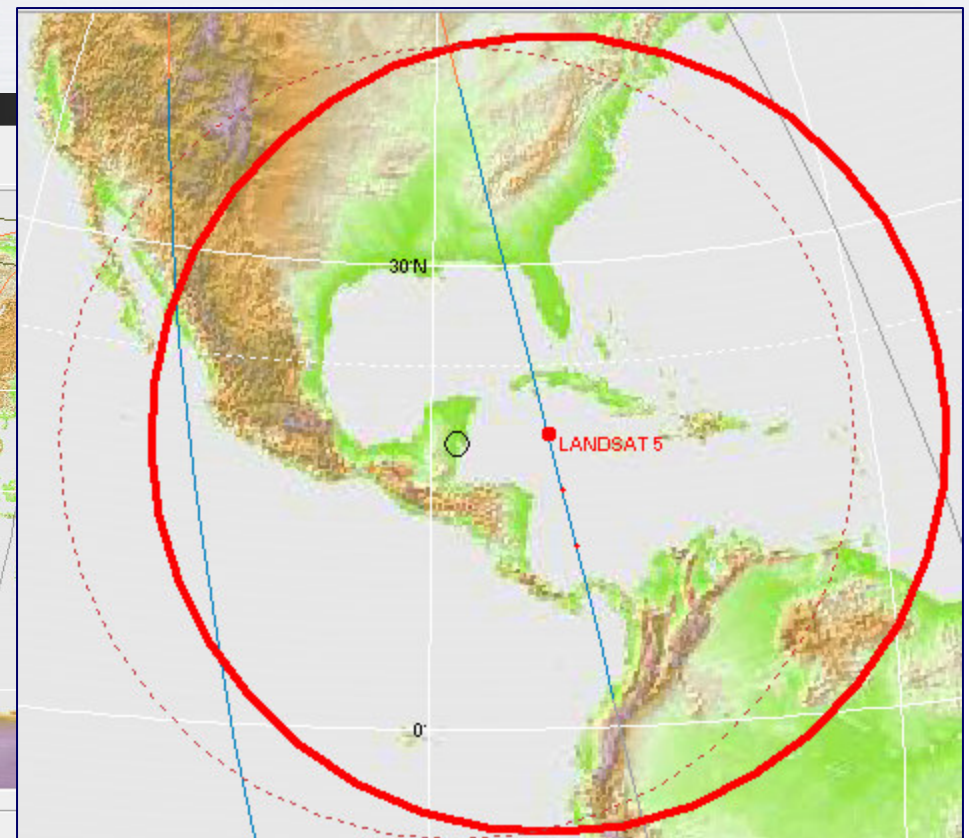
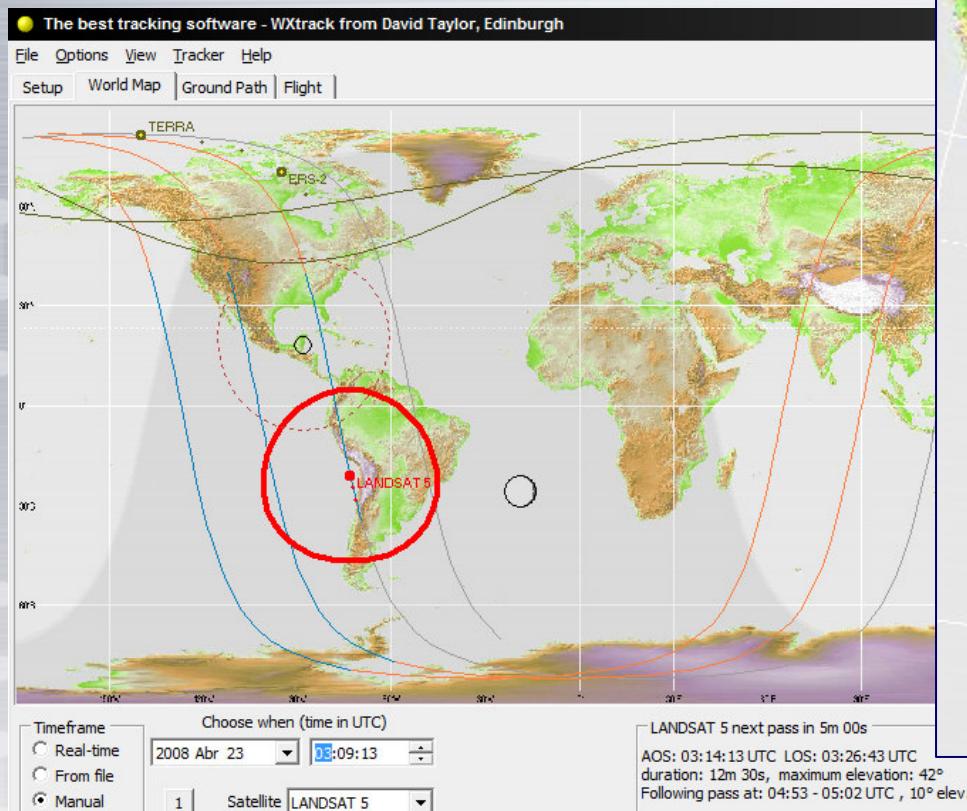
- Checking signal quality through several devices / procedures.
- Correct problems with communication devices.



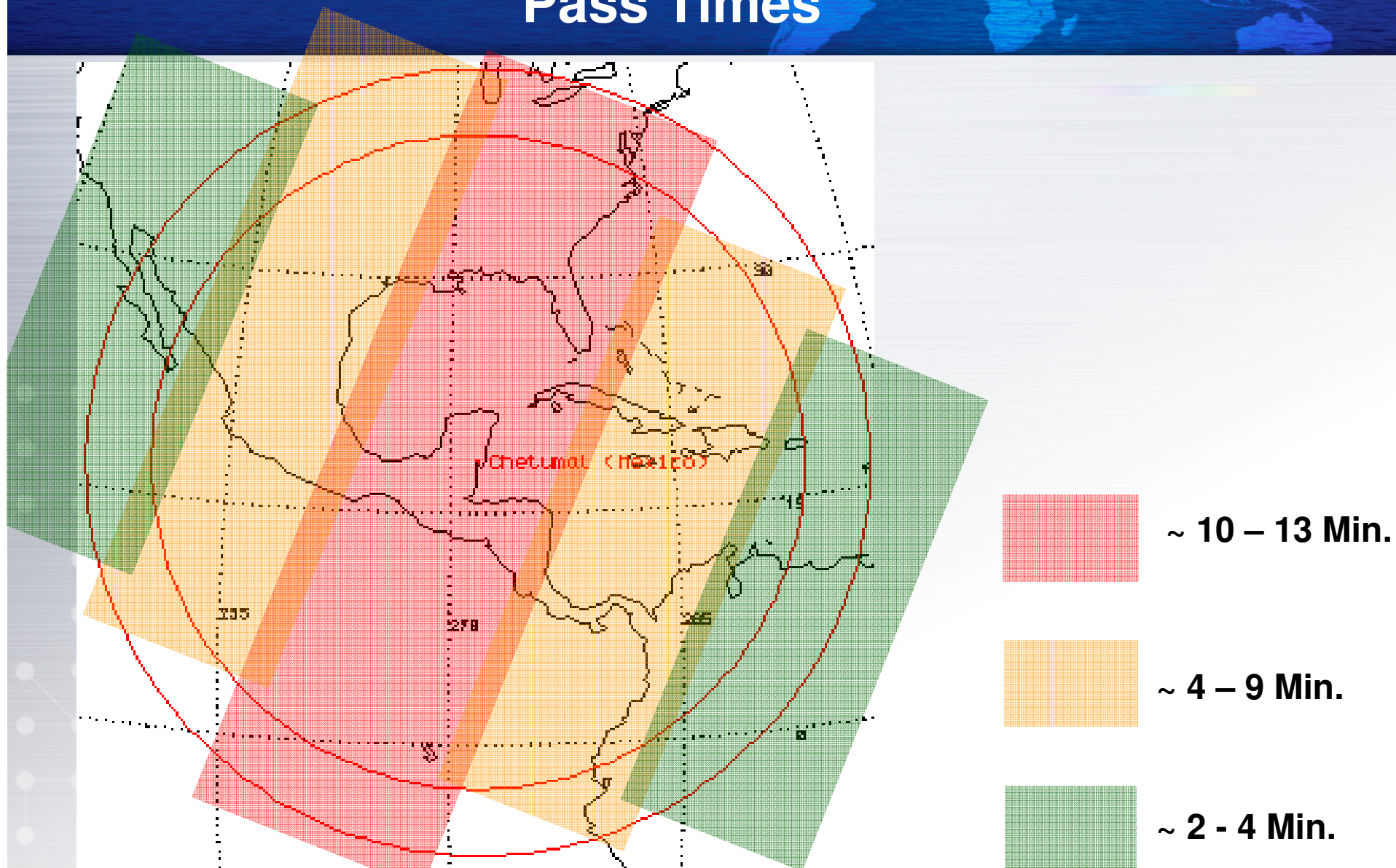
How to know where a
pass starts and when to
capture it?

Tracking System

- ❖ Agencies send the Schedule of the passes to acquire.
- ❖ WxTrack Software.



Pass Times



Statistics

Work Rate (per day)

Satellite / Sensor	Day Shift N->S	Night Shift S->N
ERS2 LBR	2	2
Landsat 5 TM	2 ± 1	0
Terra Modis	2	2

If there are possible Collisions between satellites, Local team use this rule:

- Closer path to Chetumal, in ERS2 over LS5 (or vice versa) in day shifts
- ERS2 LBR over Terra in night shifts

Statistics (Cont.)

Captured and Processed Signals

Satellite / Sensor	Passes Acquired ^{1,2}
ERS2 LBR	20
Landsat 5 TM	10
Terra Modis	16

1 Average
2 Weekly

Learning

❖ DLR:

- Basic Theory about Satellites and Ground Segment Stations
- Use of devices and systems
- Antenna Maintenance & Antenna Pedestal Maintenance

❖ INEGI:

- Basic Mexican Geography
- Geodesy, Remote Sensing basics
- Geographic Information Systems Basics
- Information Security and applications over INEGI's products

❖ ECOSUR:

- Configuration of Communications Devices

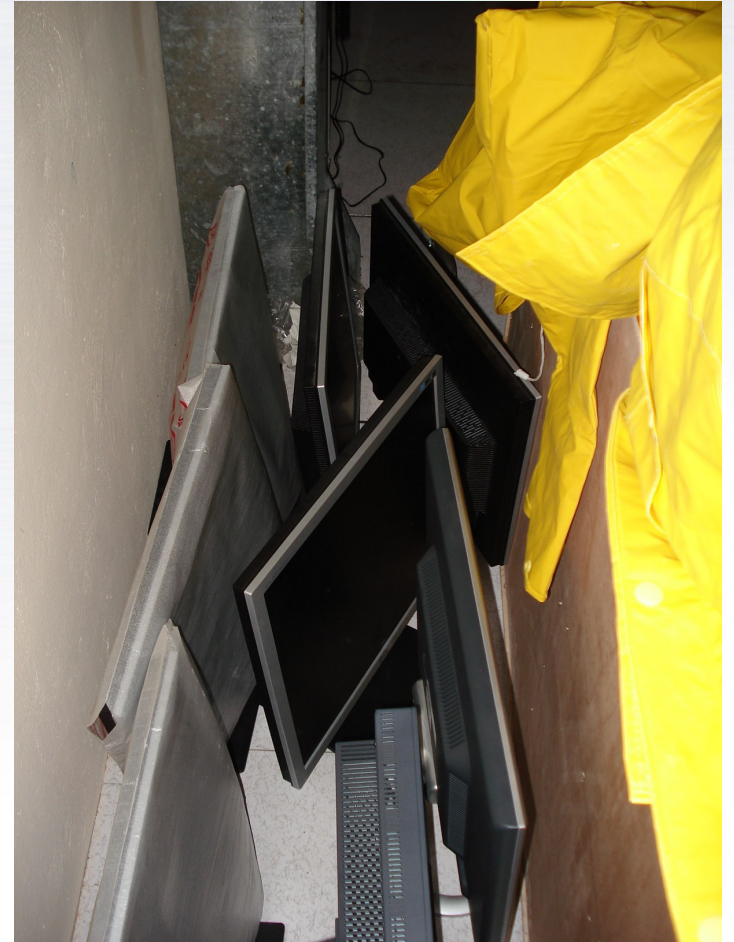
Special Procedures

❖ Potential threats procedures

i.e. Hurricane Dean (Aug 16, 2007)

- The Alert System is based in Local Government Procedures *(Based in colors and distances)*
- Previous experiences in INEGI Chetumal, were helpful to know what to do.
- General Shutdown of systems (IT / Electrical, Communications, etc).
- Securing of computers, devices, furniture, windows, etc.
- Covering with plastic all unstackable devices

Pictures



Pictures 2



Pictures 3



Special procedures

❖ Guided Visits

- Preparation of information, images, brochures, videos, examples, etc.

❖ Main Visits

- Felipe Calderon, President of Mexico (Inauguration).
- Environment & Natural Resources Minister.
- Chairman of ECOSUR.
- Chairman of CONACYT.
- INEGI, Geography National Director, Local Geography Director.
- INEGI Chetumal Chairman.
- Chetumal City Mayor.
- Quintana Roo's Civil Protection Director.
- Students / Investigators from several Universities

Photos





Thank you



Information & Questions:
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