


OBJETIVE

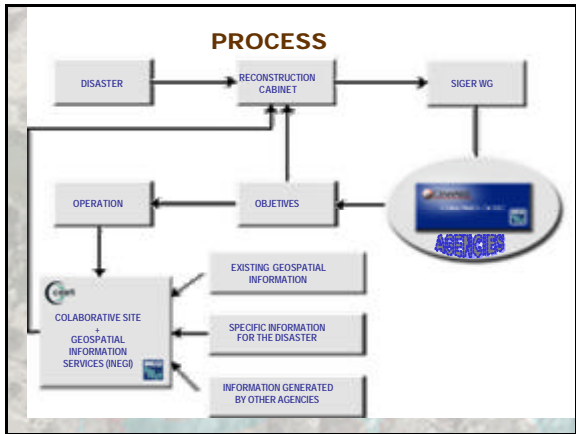
Generate spatial information to detect and evaluate the degree of damage due to natural disasters, in order to facilitate the right and the quick decision making.










WHAT IS QUICK ANSWER CARTOGRAPHY?

- It is spatial information generated as an answer to a catastrophic event in the less time as possible
- It is a valuable tool for decision making within an Emergency Attention Plan (DNIII-E Mexican emergency national defense plan)
- It is a fundamental tool within the process of detection, evaluation and reconstruction of the damages
- It is a product easily delivered on line.





SIGER WORKING GROUP

Initial call	
Capacity building	
Information availability	
Collaborative web site development	
Special surveying	
Weekly meetings call	

WHAT WE NEED?

- High resolution digital imagery
- Digital elevation models
- Evaluate damages in person and its owns
- Integration of information
- Build a geomatic solution.

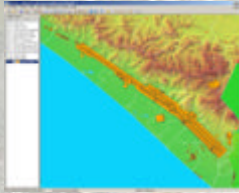



STAN Photographic Fly

Metric camera

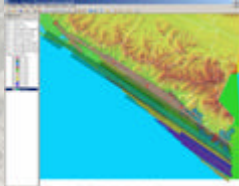


Fly missions during September 30 and October 1, 2, 9, 10, 11, 19 and 20.



Digital camera

Fly missions from October 23 to 31, and November 3 to 8, also videography.



WILMA



Imagen de radar

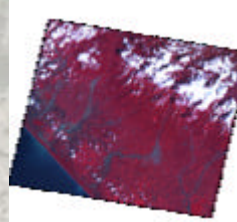


Imagen SPOT

IMPROVEMENT OF TRADITIONAL PROCESS



DIGITAL PHOTOGRAPHY



By using digital cameras (no metrics), were skipped the following traditional steps: developing, impression and digitalization of pictures, which means significant savings in time and money.

Color aerial photography allows more accuracy in the interpretation of facts.

AUTOMATIC APPROXIMATED GEORREFERENCING OF PHOTOGRAPHS

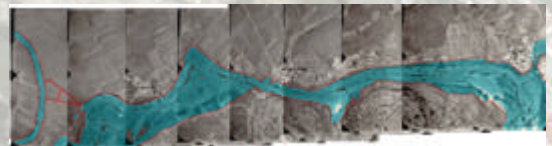


- Airplane GPS data adjustment through RGNA station (National Geodetic Active Net), getting flight trajectory.
- Photographs property Extraction

- GPS data relating to the time of shot
- LCC Coordinates assignment to each photography, centre and four corners.
- By the moment it is possible to georeference more than 200 images in minutes

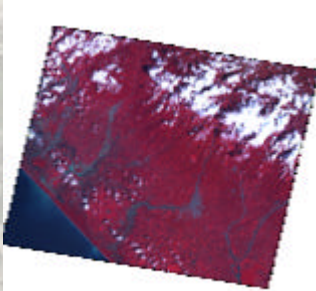


PHOTOGRAPHIC MOSAICS



High utility in comparative analysis, before and after the disaster.

Satellite Images



Multispectral SPOT Image
October 2005



Radar images analysis
October 2005

VIDEOGRAPHY

During Stan and Wilma Hurricanes they were used more than 40 hours of video as a new tool for geographic analysis



Video allows observation of large areas in short time.

OTHER INPUTS



- Digital Elevation models
- Aerial photography and orthophotos
- Basic cartography (both press and digital)
- Sociodemographic information.

ON LINE DISTRIBUTION

Organization's strategy to produce and share data from Information Producers Unities.



DGG Empowerment

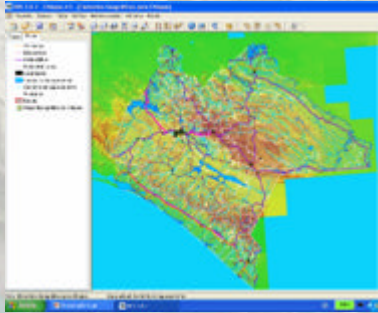
- Planning and coordinating process were improved
- Team work attitude among personnel were raised
- Awareness of Information importance was increased.
- So were experience, training and capacity among personnel
- Improvement of equipment and infrastructure
- Links with other dependencies were fortified.



Stan and Wilma Hurricanes indicators

- Damaged zones coverage: 20,322 km². States of Chiapas, Oaxaca, Quintana Roo, Yucatán and south border with Guatemala (Suchiate River)
- Shots from 3 aircrafts including one helicopter
- 2603 metric camera photographs
- 4,949 digital camera photographs
- More than 40 hours of video
- 4 Radar images
- Developing of a new methodology for automatic and basic georeference process.

GEOMATIC SOLUTION BASED ON IRIS SOFTWARE



SALINAS LAS COLORADAS Northern side of Yucatán Peninsula



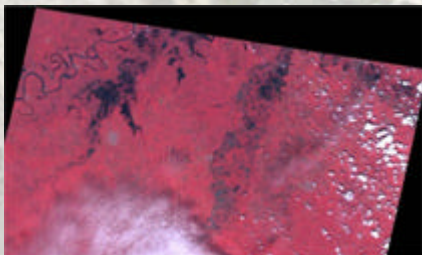
MUELLE AL ESTE DE CANCÚN



PLAYA Y MUELLES EN EL EXTREMO NE DE CANCÚN



ZONAS DE CULTIVO ENTRE LOMA BONITA Y ACAYUCAN, VER.



Challenges and expectative

- Although answer timing has been lowered, nature of disasters demands being aware constantly of improving the process as well as make it more efficient
- Generated information must be constantly related to changing needs
- Solutions must tend to simplify the use and access to the information
- INEGI´s short term future will tend to an opening of new kind of services which will define our route of action
- There have to be more involving and compromise of INEGI´s state and regional areas