ENTERPRISE GIS
IN TOTAL E&P INDONESIE

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TOTAL E&P INDONESIE

COMPANY PROFILE

Total E & P Indonesie Company is an upstream affiliate of Total Group, one of the leading Oil and Gas Companies in the world.

Operation activities in 11 Site Custodianships, covering 6,281.5 km^2 and average 300 Work Permits are opened every day.

Manages a set of databases and store information of about 1,900 wells within 229 clusters, 2,135 oil and gas platforms, more than 1,962 km pipeline network, 600 km^2 shrimp ponds, movement of 500 fleets (rig, barges, vessel, any boats), 7 weather monitoring stations, and any other data such as environment, social interaction, economical & public facilities in Delta Mahakam & Offshore Operation area.

More than 160 feature classes, and 15,000 CAD drawing files

Mahakam Delta

Paris

SANTAN TERMINAL

BADAK ?RF

NPU

CPU

SPU

HANDIL II BASE
CPA

BSP TERMINAL

20 km

10 mi

BALIKPAPAN OFFICE

•Operation activities in 11 Site Custodianships, and average 300 Work Permits are opened every day.

Mahakam versus Paris

BACKGROUND

Many applications are running on daily basis deal and correlate to geographic coordinates or maps to support operation in Total E&P Indonesie are owned, managed and used by different entities, and handling a huge amount of data in various specific databases.

In a case of emergency situation, for example oil spill is identified from a pipeline near shore adjacent to village and shrimp ponds farm area. Many departments are involved to provide necessary information for decision making :

§ Pipeline department to inform specified pipeline that causes the oil spill for further action of field operation/ production department.

§ Drilling, construction, well service department and seismic team to inform the latest status of their operation and then work together with Marine department to prepare the safe location for stand by location of rig, construction, dredging, well service barge, seismic vessel and others marine fleet.

§ Marine department to provide tracking position of all vessels being occupied in real-time.

§ Survey department to provide updated and reliable map showing location, detail topography, land cover, marine hazard and weather condition.

§ Safety and environmental department to run simulation of oil spill to locate possibility of area impacted.

§ Communication department to provide socio-economical information/data such as demography, settlement, detail shrimp ponds/fish trap data, social structure, public and health facilities of surrounding area.

GIS DEVELOPMENT

An emergency situation can be visualized and monitored in "one window/screen" as one stop service tool to give all kind of information required instantly and in a comprehensive view, efficiency in order to support a decision making and be extreemly useful to create an emergency response strategy.

The enterprise GIS is a solution to integrate data and applications within organization and to bring benefits to large number of users from many entities to manage, share and use spatial data and related information to address a variety of their needs collectively, including data creation, modification, visualization, analysis and dissemination to support their planning and activities.

GIS DEVELOPMENT

Development of Enterprise GIS is divided into 4 phases and has been developed since 2006.

Phase 1:
Desktop Application Development
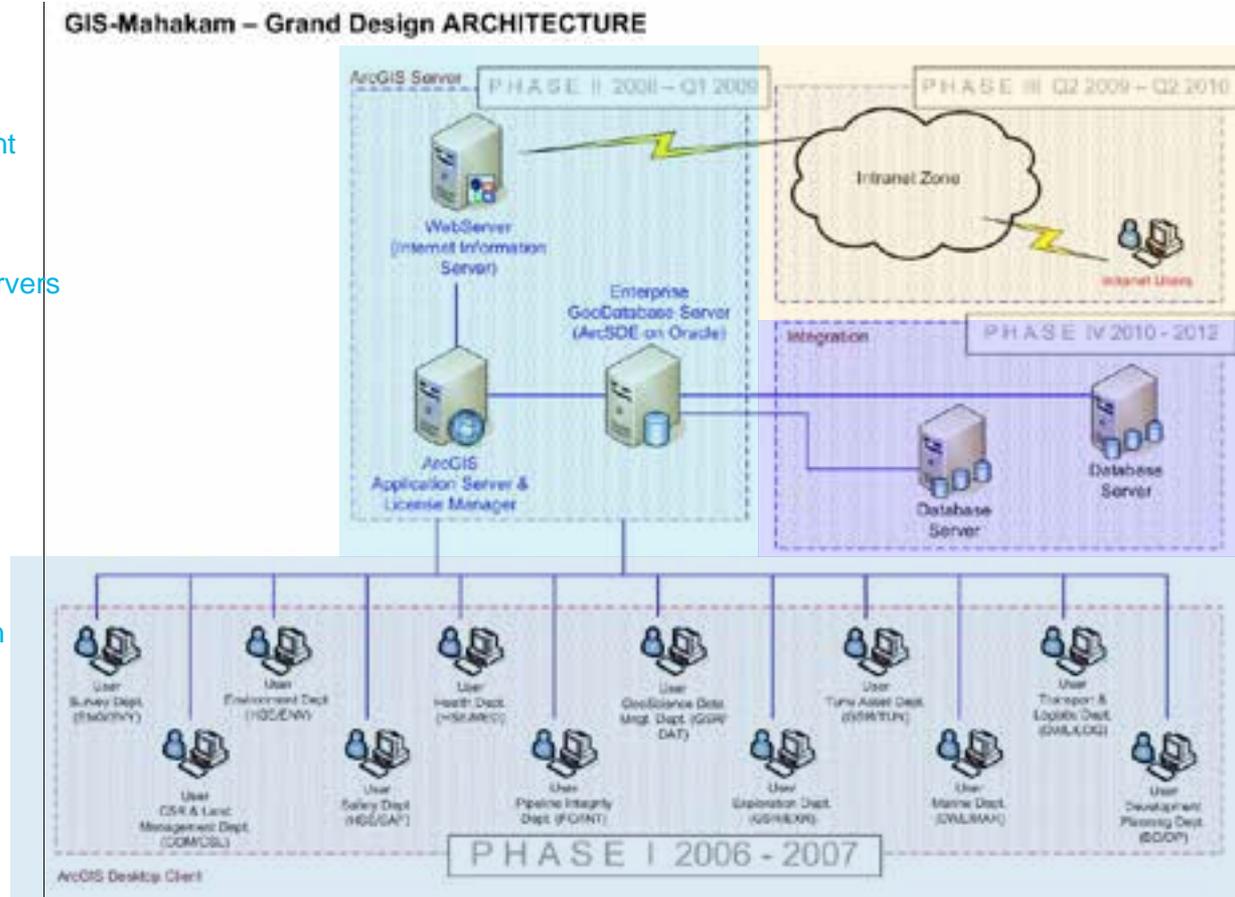2006 - 2007

Phase 2:
Centralized Geodatabases & Servers
2008 - Q1 2009

Phase 3:
Intranet Web-GIS Application
Development
Q2 2009 - Q2 2010

Phase 4:
Enterprise Databases Integration
2010 - 2012

GIS DEVELOPMENT

Acquire Right · Explore · Appraise · Develop · Produce · Transport · Refine · Market

Introducing WebGIS is a tremendous way to publish and share geospatial data and activities. It's focused to cope and support E&P lifecycle and changing the way of daily activities in:

- § PLANNING, DESIGN & PRE-PROJECT (Well Location Planning, Well Site Preparation, Engineering Documents, etc)

- § OPERATION (Well Service, Work Permit, Production, Marine Hazard, Seismic Activities, Real-time Vessel Tracking, etc.)

- § Health, Safety, Environmental and Societal (Geographic Response Strategy, Oil Spill Simulation, anomalies, Land Asset Documentation, etc.)

The chosen innovative technical solution has been developed to integrate and synergize any potential applications on Geographic Information System software (GIS) platform at the Enterprise level.

USER STATISTICS

WebGIS have been accessing since June 2009, by 12 divisions and more than 35 departments.

Graph Growth (Accumulation)
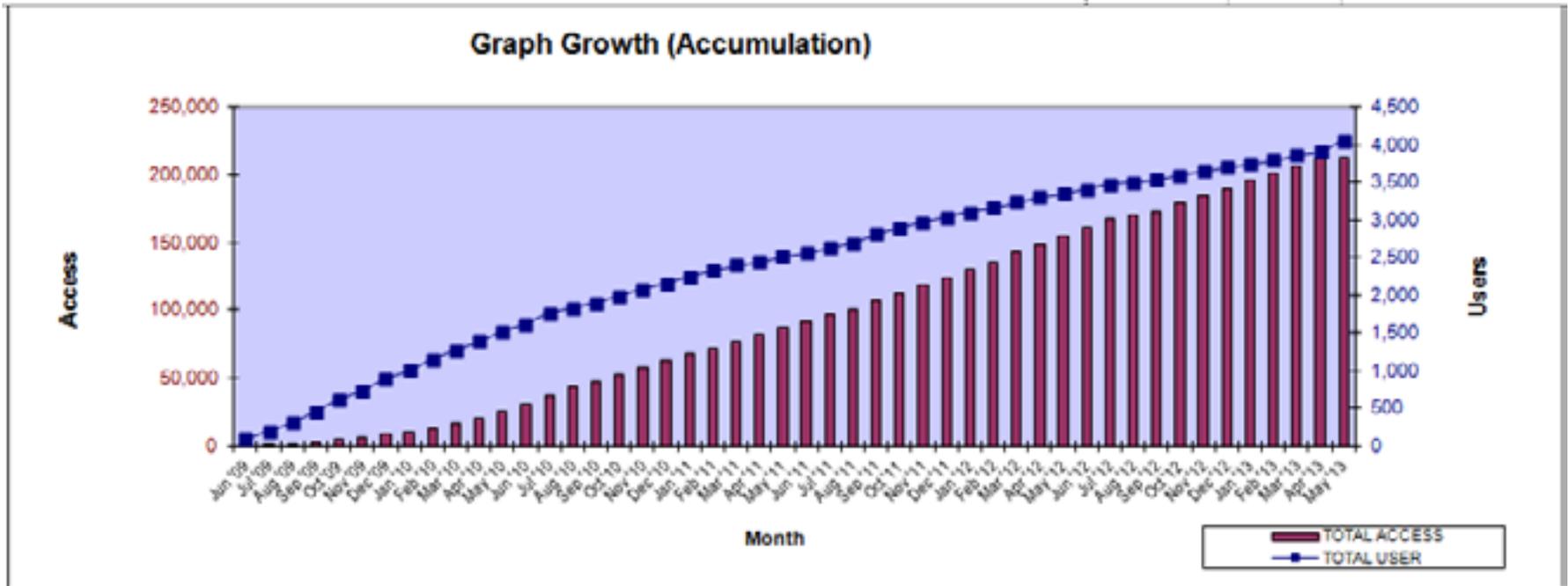
Total Users : 4,060

Total Hits : 213,160 hits

Average per day : 816 users and 207 hits

Average per month : 1,173 users

* Data per June 01, 2013

BENEFITS

Efficiency in triple-constraint

- § **Time**, give faster and comprehensive information to planning, support operation and decision making
- § **Cost**, low cost in development and deployment
- § **Man Power**, no specific skilled training required

Simplify visualization of the emergency response strategy (identification, evacuation, mobilization, deployment and consideration of socio-economy-environmental impact)

- § Easier in coordination and collaboration with external parties
- § Reduce of data duplication, auditable and able to re-display
- § Paperless (**Green Campaign** and Cost Reduction)

THANK YOU