



Building Records e-Search (Building Records at Your Finger Tips)

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FIG Working Week 2007
15 May 2007

What are the building records kept by BD ?

- 20 million plans and related documents of existing **private** buildings
- containing spatial information :
building height, plan layout, plot ratio and site coverage



Important reference to business operators, building professionals, government departments and the **public**



Building Information Centre

- Provides viewing and copying service to members of public
- Handles 340 applications every day



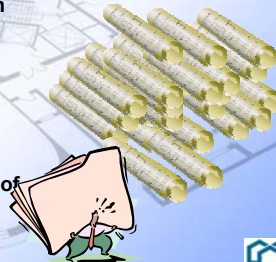
How to manage the building records?

In the past...



Some problems of paper-based management system

- ✗ Paper records suffer from ageing and deterioration
- ✗ Manual retrieval
→ Time consuming
→ labour intensive
- ✗ Large storage space required
- ✗ Loss and misplacement of paper records
- ✗ No concurrent access



Challenge



Paper-based Record Management System

- To solve the problems of the paper system
- To enhance service performance

Computerized Record Management System

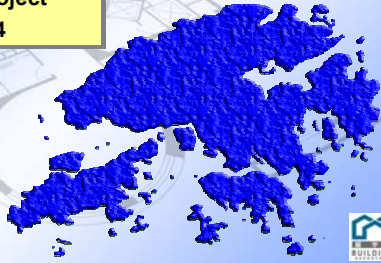
Building Records e-Search (BReS)



Development of BReS

Pilot project in 2001

Full Scale Project
starting 2004



Pilot Project

Results

➤ Positive feedback

Lessons learnt

- Identified operational problems
- Separate project assignment into two tenders
 - Scanning
 - Software solutions
- Accurate costing



Full Scale project



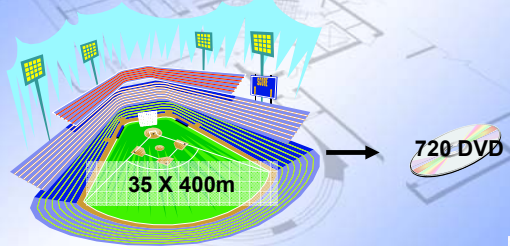
Imaging

Total turnover : 170,000 paper files
Production : 20,000,000 TIFF images
Storage : 3000GB
Production centre : operates 7x24 for 2 years



Transformation

14,000 linear metre of paper equals



Full Scale Project

System development

- In 2004: separate Intranet and Internet system
 - Intranet run in BD local area network
 - Internet hosted in the Data Centre of EMSD
- In 2006: Internet with high availability features set up in Data Centre of the OGCI0



Full Scale Project

Use of Information Technology

- Geographic Information System (GIS)
 - easy navigation and map search
 - 100,000 building polygons
- Digital rights management tools
 - preventing unauthorized printing and copying
- Authentication Token System
 - access control for government user



Issues and Considerations

- Legal framework
- Financing
- Security Issues
- Skills
- Service level



Issues and Consideration

Legal framework

Empower the Building Authority to

- provide the plan viewing and copying services in e-format

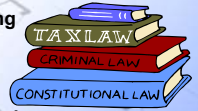
→ amend Building

Ordinances

- Charge fees for the services rendered

→ amend Building (Administration)

Regulations



Issues and Consideration

Financing

➤ Non-Recurrent expenditure

Set-up cost – hardware/software Imaging cost



➤ Recurrent expenditure

Running cost of operating and maintaining the system



Issues and Consideration

Where to get the money?

● Non-Recurrent expenditure

- Pilot project

→ The Financial Services and the Treasury

- Full-scale project

→ The Finance Committee of Legislative Council

- Web-based Retrieval of Building Records System

→ Administrative Computer Projects Committee

● Recurrent expenditure

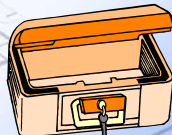
→ Absorbed in own departmental expense vote



Security Issues

Security of paper records and e-records during the image conversion

- All staff of Contractor to sign a Non-disclosure agreement
- Dedicated transportation team
- Reconciliation at checkpoints
- Special tools to track the movement of paper records
- Special System design to prohibit unauthorized access and to prevent unauthorized amendment of data and replacement of images and data



Security Issues

System Security

- Digital rights management tools
- Authentication token system for government users
- Firewalls and Intrusion Detection System (IDS)
- 7x24 surveillance against hacking activities and unauthorized access by Data Centre
- Compliance with the Government's Baseline IT Security Policy



Skills Involved

- > **Sorting** to identify records to be scanned

Transfer of skill from BD staff to the contractor

- > **Imaging**

outsourcing adopted to harness the latest technology

- > **System Development**

outsourcing adopted to harness the latest technology



How to maintain the service level ?

Performance Pledge → to make records available for viewing within 9 days

- > Outsourcing the imaging work in order to deliver the BRoS within a reasonable time (operates 7x24)
- > rolling out district by district basis
- > Built-in contract provision for timely and urgent return of paper files
- > Employing project management tools e.g. milestones, regular progress and technical meetings



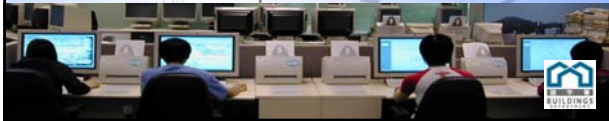
What are the Benefits ?

Improvement in service performance

Retrieval time from days to minutes

- ✓ Instant viewing service
- ✓ Concurrent access
- ✓ Less labour => lower fee

Better, faster but cheaper



Other Benefits ?

Searching made easy :

- Search building by address, lot no, street name, map search etc
- Search records through series of systematic indexes

Place order directly on the system

More User-friendly



Searching methods:

- Address
- Building Name
- Lot Number
- BD's building file reference

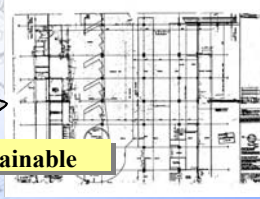
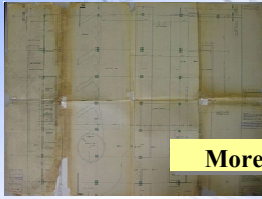
Drawing No.	Drawing Title	Remarks	Plan Type	Approved / Receipt Date	Floor	Record Date
SBM82H030001	CONTRACT FOR HONG KONG CENTRAL & SOUTH DEVELOPMENT PHASE 1 - SOUTHERN SITE BLOCK PLAN		Approved Plan	1997/1997		
SBM82H030001	CONTRACT FOR HONG KONG CENTRAL & SOUTH DEVELOPMENT PHASE 1 - SOUTHERN SITE BLOCK PLAN		Approved Plan	1997/1997		
SBM82H030002	CONTRACT FOR HONG KONG CENTRAL & SOUTH DEVELOPMENT PHASE 1 - SOUTHERN SITE PLAN AT LEVEL 1/2ND		Approved Plan	1997/1997		
SBM82H030002	CONTRACT FOR HONG KONG CENTRAL & SOUTH DEVELOPMENT PHASE 1 - SOUTHERN SITE PLAN AT LEVEL 1/2ND		Approved Plan	1997/1997		
SBM82H030003	CONTRACT FOR HONG KONG CENTRAL & SOUTH DEVELOPMENT PHASE 1 - SOUTHERN SITE PLAN AT LEVEL 1/2ND		Approved Plan	1997/1997		
SBM82H030003	CONTRACT FOR HONG KONG CENTRAL & SOUTH DEVELOPMENT PHASE 1 - SOUTHERN SITE PLAN AT LEVEL 1/2ND		Approved Plan	1997/1997		
SBM82H030004	CONTRACT FOR HONG KONG CENTRAL & SOUTH DEVELOPMENT PHASE 1 - SOUTHERN SITE PLAN AT LEVEL 1/2ND		Approved Plan	1997/1997		

Lists of document details:

- Drawing No.
- Drawing title
- Plan type
- Approved / Receipt Date

More Benefits ?

Addressing the problems of paper records
Preserving the valuable information
Less paper



More Sustainable



Benefits to the Community

- Facilitates development, re-development, carrying out of alteration and addition works, change of use
- Removal of unauthorized buildings works in existing buildings
- Assist firefighting officer to effect rescue and fight fire



Achievements

- eGovernment "Most popular e-public Service" Bronze Award in the Hong Kong ICT Awards 2006

Organizer : Hong Kong Institution of Engineers



Paves the way for...

- Extending the viewing and copying service 7X24 over Internet
- Data sharing among government departments through an information portal



Thank You

