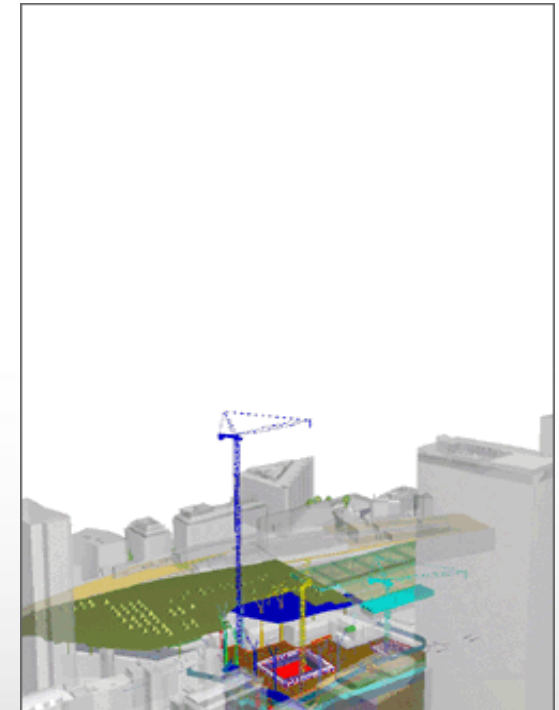
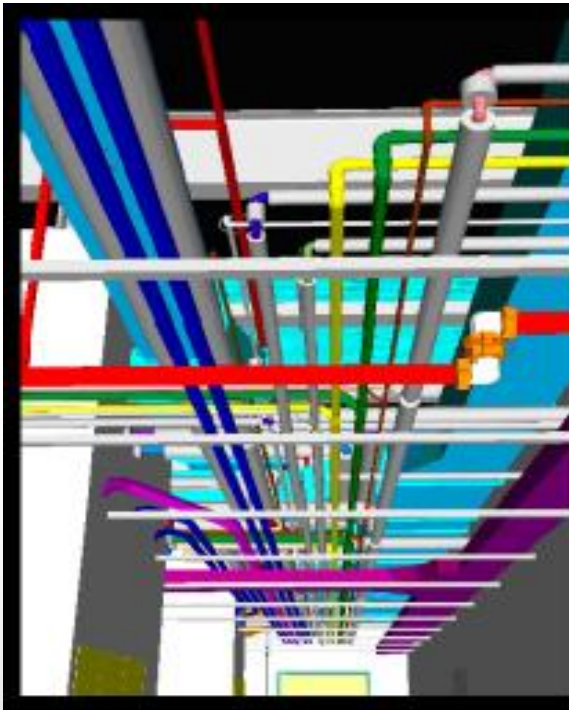


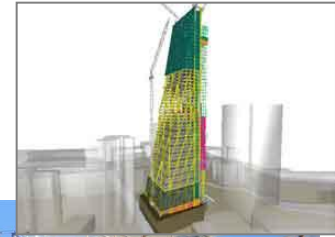


BIM: The link to construction and its management

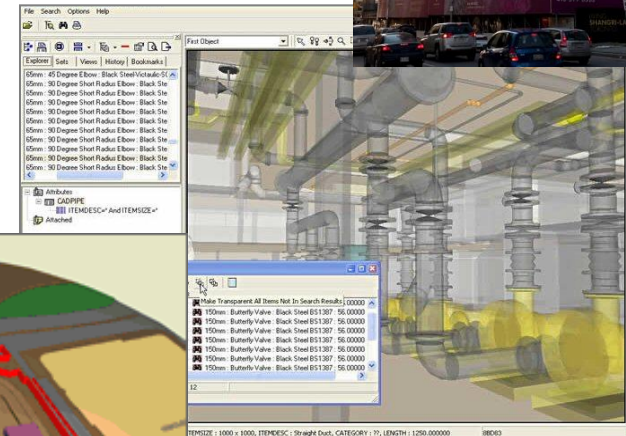
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Director: Advanced 3D Technologies



- Introduction
- What is Building Information Modeling/Management (BIM)
- The role of BIM in the building design process
- Virtual Planning and Construction (VPC) & VDC
- Summary



- Historical overview
- Client dissatisfaction
Inability to deliver on time, to budget!
- The march of technology
- Delivery methodology
Design-Bid-Build
Design-Build
CM-at-Risk
IPD/Partnering
PPP



Definition: 'A digital representation of the physical characteristics of a facility derived from information stored in relational databases.'

- BIM is therefore not CAD

I is for Information

Parametric

Digital

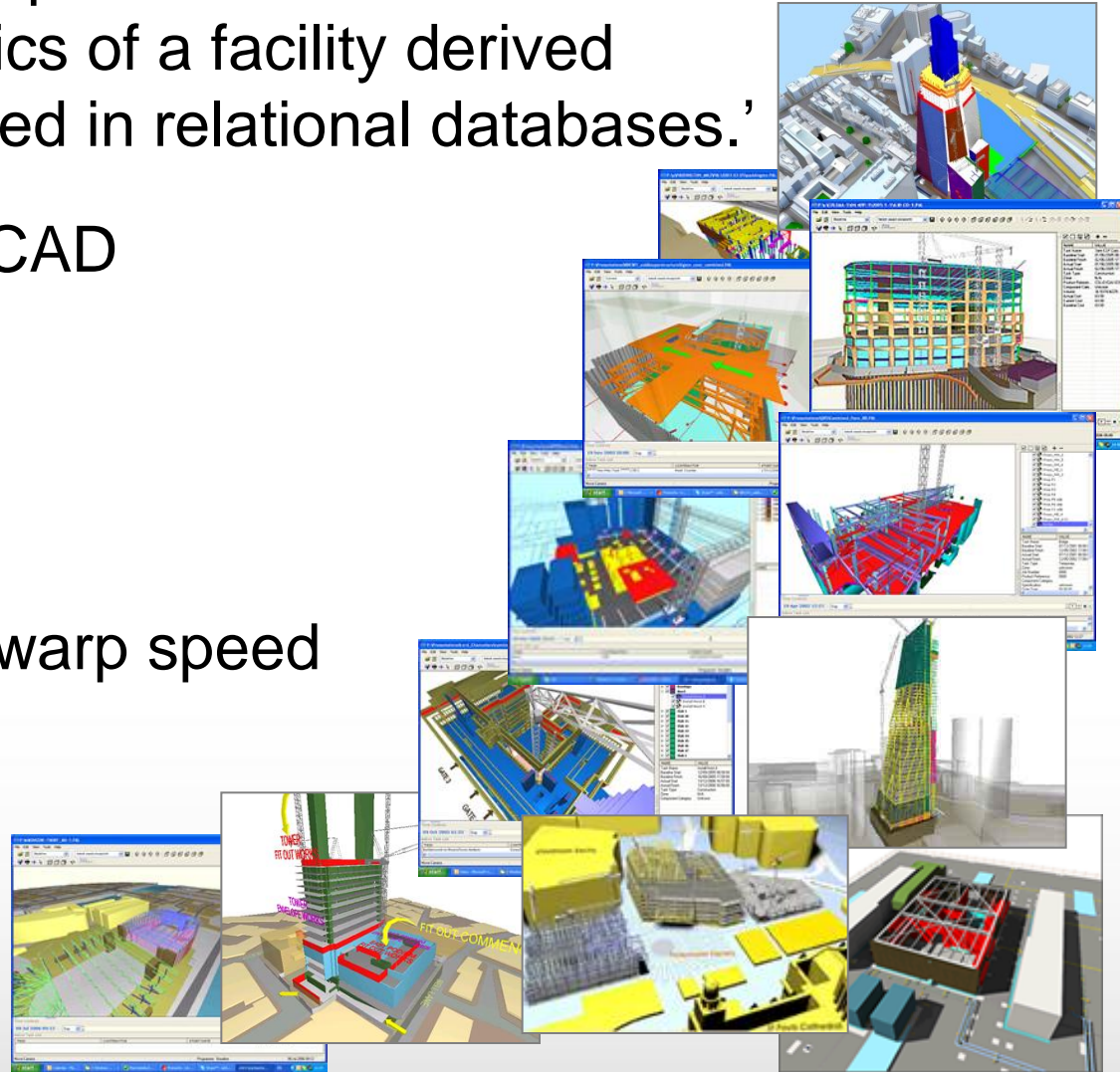
- Enhanced design at warp speed

The next level of design

Greater coordination

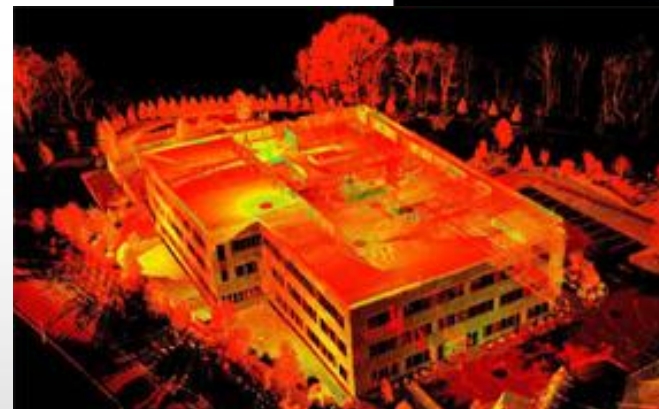
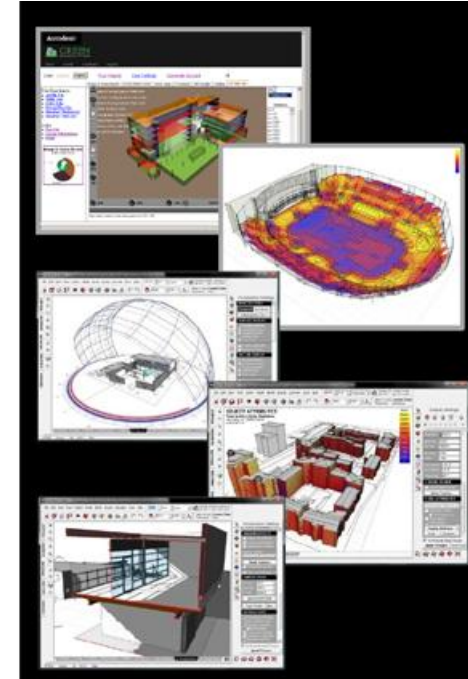
Standardisation

Geographical separation



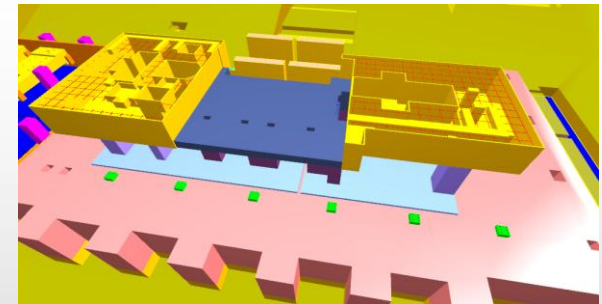
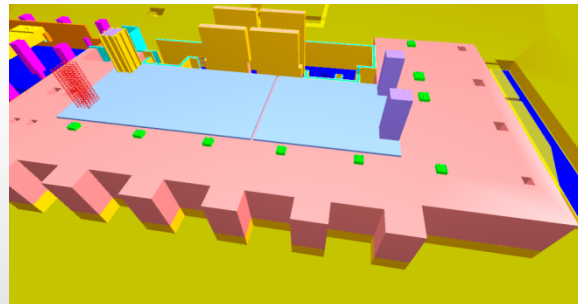
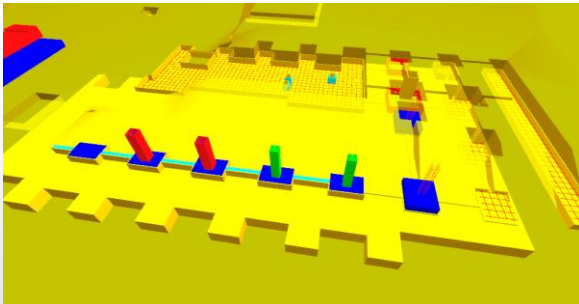
Role of BIM

- Integrating the delivery process
 - Design teams
 - Earlier involvement of constructor
 - Management tool
 - Sustainable buildings
- Lifecycle design database
- Iterative Analysis/Simulation of engineering
- Waste reduction
 - Off-site prefabrication
 - Energy efficiency savings



Building virtually 1st

- Plan better
Increased task activities
- Reduce risk
Visual coordination
- Lower costs
- Education tool



Benefits to the delivery process

- Automated take-off
 - Bills generated from model
 - Digital procurement lists
 - Automated tracking of changes
- Logistics efficiency
 - Lean methodology
 - Logistics tracking
- Digital Fabrication
 - CAD-CAM pre-fabrication
 - Robotic shaping of forms
 - 3D printing of objects



- BIM is more than just another design tool
- Building Science design process has been re-written
- Maximising potential key to professional progress
- Less wasteful project delivery process is expected
- Roles and responsibilities will continue to merge
- Contracts will change