TMA *

The Mendicant Architect, LLC

"The Answer for All Things BIM"

Cloud Computing

&

How it Will Affect the Architecture, Engineering, and Construction Industry

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Advance 2000

Cloud Computing

Productivity.Optimized.

Darrell Smith – Education & Certifications

- Education
  - Bachelor of Architecture from the University of Texas – Austin – 6/1995
- Certifications
  - Licensed Architect – TBAE #18320 – 10/2003
  - NCARB Certified - #57954 – 12/2000
  - C.S.I. – Construction Document Technologist – 04/2005
  - AIA Member – 02/2009
  - Autodesk Certified Associate & Professional for Revit Architecture, Revit Structure, Revit MEP, and Navisworks since 2007 (2010 for Navisworks).
  - Authorized Agent for Advance2000 – 04/2012
    - Cloud Computing and IT solutions.
  - Authorized Agent for Assemble – 04/2012
    - A proven design and construction platform that integrates best-of-class BIM products to enable interoperability, visualization, and change management.
  - Authorized Agent for Lumion via Act-3D – 01/2013
    - The fastest HD rendering and animation program on the market.

Darrell Smith – Experience

- Experience
  - Practiced Architecture for 9 years.
  - Worked as Mechanical, Electrical & Plumbing Designer for 2 years.
  - Provided Revit, Navisworks, and other BIM related software, Training, Mentoring, Content and Template Creation, and Consulting since 12/2006.
  - Trained over 800 Architects, Interior Designers, Structural & MEP Engineers, Contractors, Sub-Contractors, & Manufacturers.
  - Implemented BIM in over 200 AEC Firms.
  - Provided training for UT School of Architecture, ITT Tech, Del Mar College, and Autodesk University.
  - Revit Beta Tester since 2007, Navisworks Beta Tester Since 2010
  - Founded The Mendicant Architect – 03/2010
  - Co-Founded AARUG (Austin Area Revit User Group) – 11/2011

AARUG
AUSTIN AREA REVIT USER GROUP
ALL INDUSTRIES, ALL USERS, ALL REVIT

CONTINUING EDUCATION
AIA

Best Practices

- CEFPI is a Registered Provider with ***The American Institute of Architects Continuing Education Systems (AIA/CES)***. Credit(s) earned on completion of this program will be reported to ***AIA/CES*** for AIA members. Certificates of Completion for both AIA members and non-AIA members are available upon request.

  This program is registered with ***AIA/CES*** for continuing professional education. As such, it does not include content that may be deemed or construed to be an approval or endorsement by the AIA of any material of construction or any method or manner of handling, using, distributing, or dealing in any material or product.

- Questions related to specific materials, methods, and services will be addressed at the conclusion of each presentation.

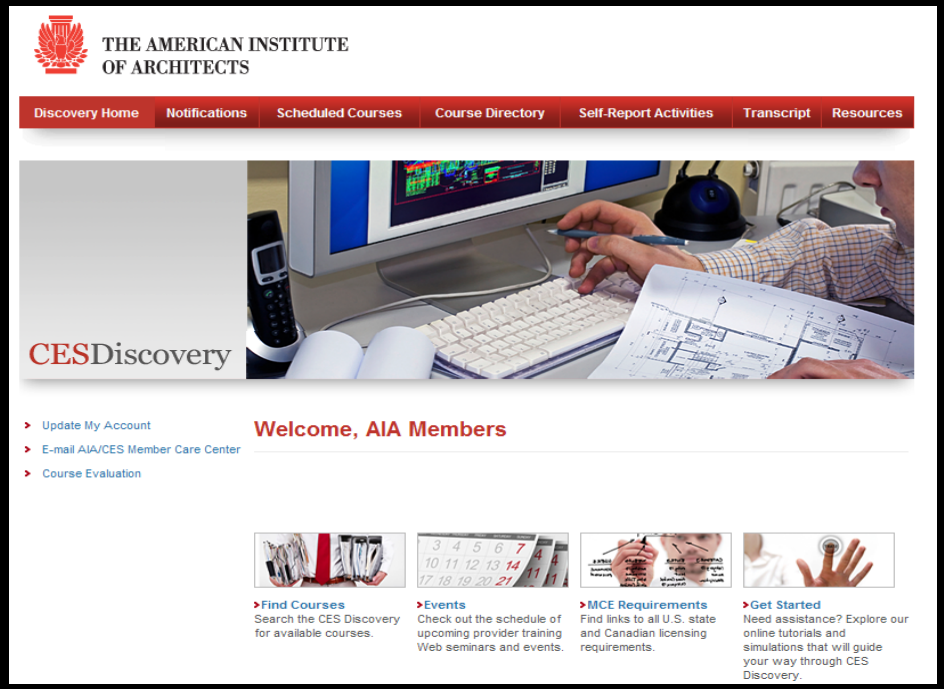
Learning Objectives

At the End of this program, participants will be able to:

- Understand what the "Cloud" is, the different types of cloud available, and the strengths and weaknesses of each type as it relates to BIM.
- Understand how Cloud Storage, in common use today, has evolved into Cloud Computing and how this trend will directly influence and affect companies BIM workflows and business.
- Understand what a collaboration hub is and how it can increase productivity and collaboration while reducing obvious as well as hidden costs.
- Understand how Cloud Computing will transform the way we do business in the AEC industry, and how companies can integrate it into a BIM and IPD implementation plan.

Course Evaluations

In order to maintain high-quality learning experiences, please access the evaluation for this course by logging into CES Discovery and clicking on the Course Evaluation link on the left side of the page.



Topics We Will Cover

Industry Solutions

- Industries appropriate for Cloud Computing Solutions
- Technical Needs and Services available through Cloud Computing

Industry Challenges

The Four Types of Cloud

- Distributed, Public, Private, and Private Hosted

Industry Trends leading Business to the Cloud

Advantages offered to Businesses moving to the Cloud

Technical Capabilities of the Cloud

- Access Devices
- Applications
- Stability and Security

Don’t Misunderstand the “Cloud”

Industry Solutions

Industries appropriate for Cloud Computing Solutions:

- Healthcare
- Government
- Education
- Legal (Professional Services)
- Manufacturing
- AEC

Technical Needs and Services available through Cloud Computing:

- Business Continuity and Resiliency
- Help Desk and End-User Support
- Integrated Communication Services (Telephony)
- Middleware Services
- Security Services
- Maintenance and Technical Support
- IT Strategy and Audit
- Cloud Storage
- Cloud Computing

Industry Challenges

Industry Challenges:

- What impact would “Real-Time Collaboration” have on your firm?
  - Immediate access from any device, at any time?
  - Time transferring data?
- How long does it currently take your firm to add a person to your project team?
- Do you have successful data backups every night?
- What is your present plan in the event of a disaster?
- Due to the cost of IT and hardware investments, do you feel like you are in the IT business?

So, What can the “Cloud” do for you?

The “Cloud” is Cyberspace & the Internet, but “Cloud Computing” is so much more….

- Imagine the transformation of IT into a Utility, like your Electricity or Water, turning your current CAPEX into an OPEX.
- Pretend you have On Demand access to Scalable Computing.
- What if the “dud” computer you once needed to replace was actually enough or needed minimal changes to operate in a fully effective manner?
- Lower Cost & Faster Computing = Better Productivity.

It’s not all in the hardware…., but It is Simple Math

- If you could save 2 weeks a year, or 20 minutes a day, that means $$$.
- $2,000/year for an employee, making $50,000/year.
- Regain the time from file management and coordination efficiencies.

What is the “Cloud”?

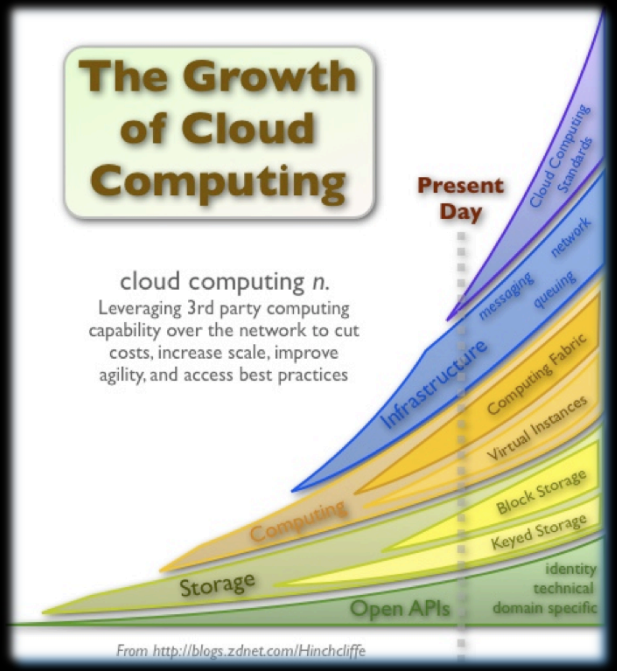
You are probably already in the “Cloud” in one form or another:

Stratifications of “Cloud Computing” Formations:

- Distributed – Current Strategy.
- Public – Powerful, but Limited in Scope and therefore incomplete.
- Private – Powerful, but Expensive and due to Costs, not as Secure.
- Private Hosted – Powerful, but without the Headaches.

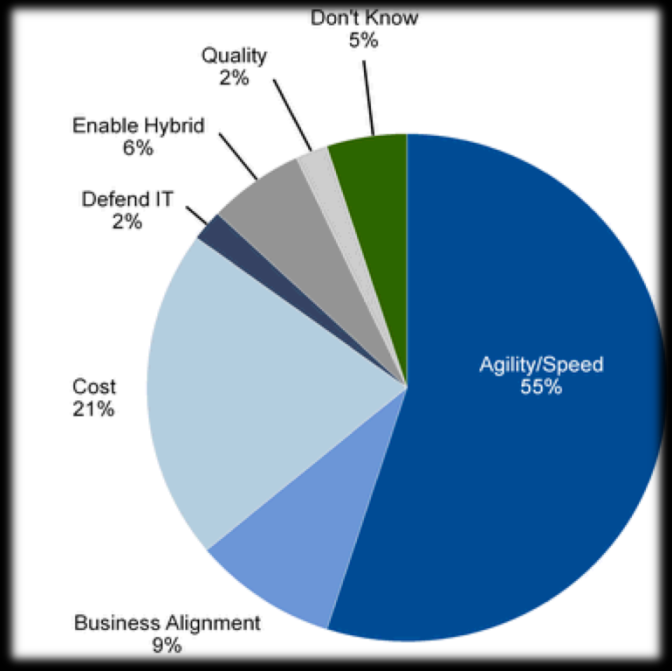
What are the Trends and the Business Drivers to Move Firms to the “Cloud”?

The Growth of Cloud Computing



Gartner Prediction: Cloud Computing Adoption, 90% by 2013.

What factors would cause a firm to transition to the cloud?

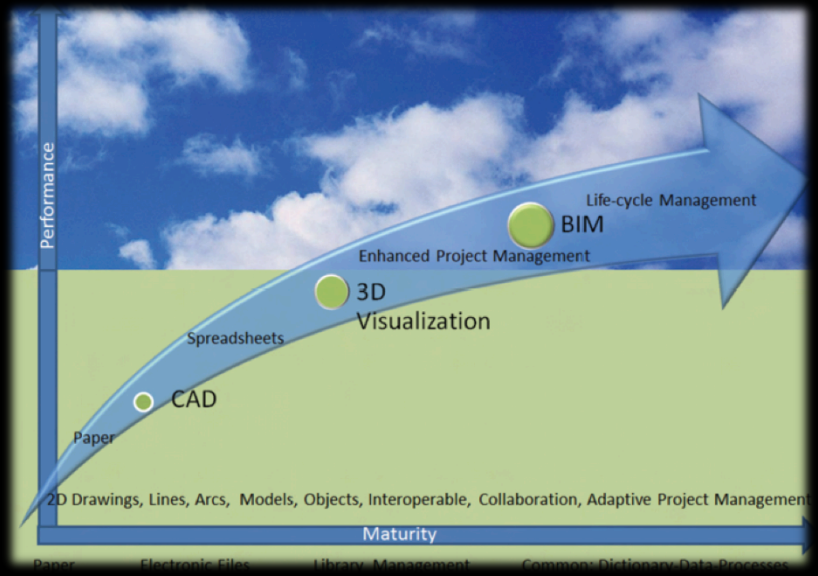


Gartner 2011 Survey

Cloud – The Perfect Storm

So, why NOW?

- Virtualization Protocols
  - VMware, Citrix, Hyper-V
- Falling Cost of Bandwidth
  - Data Circuits are getting faster and cheaper.
- Choices
  - Public vs. Private Clouds



- Evolution from CAD to BIM to ?
  - Paper and CAD
  - Spreadsheets
  - 3D Visualization
  - BIM & Enhanced Project Management
  - Life-Cycle and Facilities Management