

# What's New in Cube

presented by  
Rob Schiffer, Citilabs, Professional Services Director

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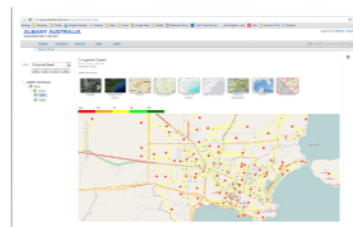
## What's New in Cube

### Overview

- Citilabs – the Company
- Cube 6.1
- Compatibility Updates
- Usability Updates
- Improvements to Highway Modeling
- Cloud Computing
- Questions



Cube Data



Cube Cloud



## What's New in Cube



### CITILABS – the Company

- Headquartered in Tallahassee
- Other Offices in Atlanta, Hartford, San Francisco, Milan, Munich, Beijing, Bangkok, and Mumbai
- Longstanding ESRI business partner
- Ownership change in 2013. Now owned by Management, Staff, and ESRI

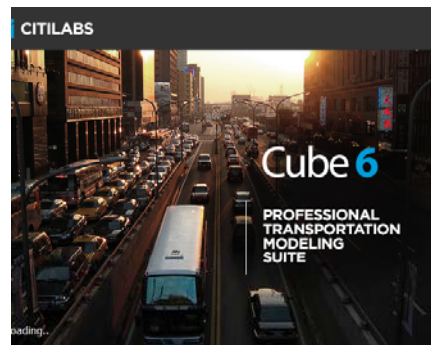


## What's New in Cube



### Cube 6.1

- Released: April 10, 2013
- Service Pack 1 released shortly thereafter with some additional updates
- An update to Cube 6 keeping the same overall look and feel
- Addition of many commonly requested features and tools
- Major overhaul of an entire library



## What's New in Cube



### Compatibility Updates

- Cube is now compatible with ESRI ArcGIS 10.1/SP 1 and uses this as the default ArcGIS Engine
- Cube is also now compatible with Windows 8 & Server 2012

ArcGIS 10.1 

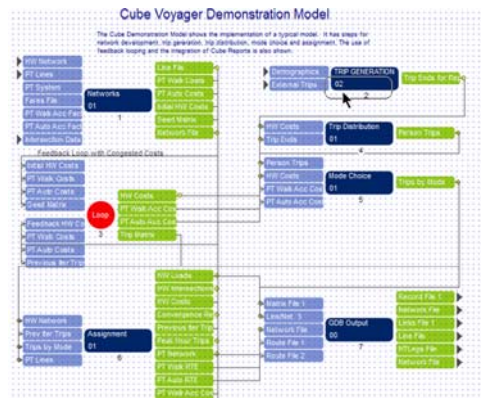


## What's New in Cube




### Usability Updates

- Snap-to-grid in application manager
- Improved editing of file geodatabases
- View larger matrices in Cube Base
- Bigger road networks (up to 10 million nodes and links)
- Multi-language capabilities in Cube script editor


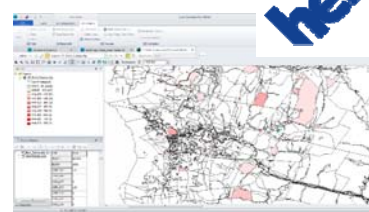


## What's New in Cube




### Improvements to Highway Modeling


- Cube Base, Cube Voyager and Cube Avenue now support up to 1,000 volume sets, trip matrices, and/or select link results!
- Bi-Conjugate Frank-Wolfe Assignment has new SMOOTH parameter to reduce oscillation patterns.
- Currently in internal beta is new traffic assignment algorithm for tight closure at high speed.
- Big Data
  - Now available: Here (NAVTEQ™) nationwide roadway network and traffic database


here




## What's New in Cube





### Cube Cloud Released in July 2012:



- Develop the Model with **Cube** in the Desktop Environment
- Publish the Model from **Cube** to the Cube Cloud
- Create, run and analyze scenarios from anywhere



## What's New in Cube

### Benefits of Cube Cloud – Reduced Run Times

**4-STEP MODEL**

| Cores | Run Time |
|-------|----------|
| 1     | 20:41    |
| 4     | 11:05    |
| 8     | 7:33     |
| 16    | 5:48     |
| 32    | 4:42     |
| 64    | 4:02     |

~>80% faster

**HIGHWAY ASSIGNMENT**

| Cores | Run Time |
|-------|----------|
| 1     | 1:59     |
| 4     | 0:46     |
| 8     | 0:29     |
| 16    | 0:18     |
| 32    | 0:15     |
| 64    | 0:13     |
| 128   | 0:08     |

~>93% faster


**ABM MODEL**

| Cores | Run Time |
|-------|----------|
| 8     | 175:13   |
| 16    | 139:03   |
| 32    | 53:40    |
| 64    | 25:57    |
| 128   | 12:41    |
| 256   | 9:58     |
| 512   | 7:17     |



~>95% faster

### Benefits of Cube Cloud – Scalability

- Start 1, 10 or 100 scenarios simultaneously — all start immediately
- Improve validation & forecasts by conducting more model runs

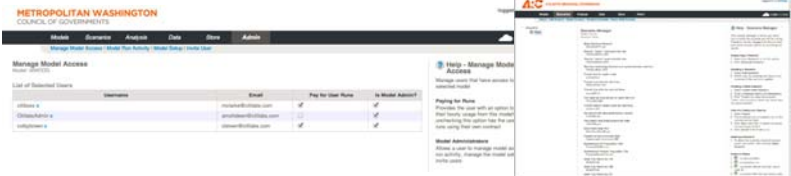



## What's New in Cube

### Benefits of Cube Cloud – Sharing

- You own model and invite others to use it
- No more physical copy of scripts and models
  - Eliminate onerous, mistake prone process
  - Eliminate version control problems
  - Protect model integrity by not sharing scripts
  - Protect intellectual property by not showing scripts
- Users run model through simple web interface

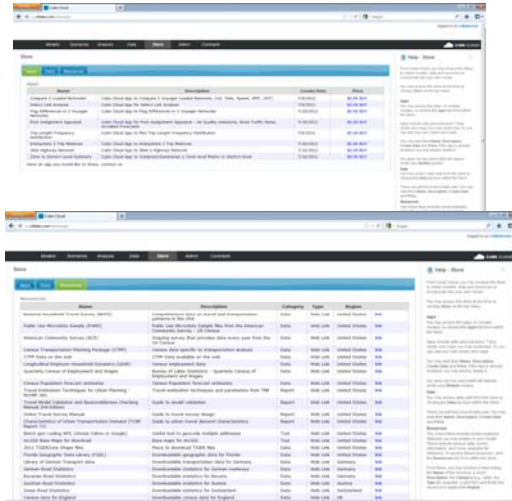




# What's New in Cube



## Benefits of Cube Cloud – Apps & Resources



- Free apps provide access to commonly used analytic tools.
- Comes standard with Cube Cloud!
- Paid apps allow users to “sell” their models on the Cloud...
- Nationwide block-level socio-economic data (free with Cloud)



# What's New in Cube



## Questions?

