# Cloud-based universal component and asset usage analysis, visualisation and reporting

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#### Introductions

- Who am I?
- Are you a developer?



#### Message and Takeaway

- Hooking up desktop and cloud is easy
- The possibilities are endless
- Let's look at examples
- All source code is public
- The rest is up to you
- Good luck!



## Room Editor – Round-Trip 2D Edit

- A Generic Cloud-based Round-trip Real-time
   2D Revit BIM Editor
- Presented at Autodesk Tech Summit 2013,
   2014 and Autodesk University 2013
  - Recording <a href="http://au.autodesk.com/au-online/classes-on-demand/class-catalog/2013/building-design-suite/dv1736">http://au.autodesk.com/au-online/classes-on-demand/class-catalog/2013/building-design-suite/dv1736</a>
  - <u>RoomEditorApp</u> Revit add-in
  - Roomedit CouchDB definition



### FireRating in the Cloud

- Based on the FireRating Revit SDK sample
  - Create a shared 'Fire Rating' parameter and bind it to the Doors category
  - Export fire rating values for all doors in a project to an external spreadsheet
  - Import the modified values back into the project



### FireRating Cloud Enhancement

 Store data for multiple projects to one single cloud-hosted database



#### Repercussions

- All users can share data for all projects
- You can imagine the rest for yourself



## Implementation

- Web server
  - Simple node.js REST server driving a Mongo DB
- Revit add-in
  - Implements the same three external commands
  - Read and write cloud data via REST



#### Demo

- Locally and live on the web
- Heroku and Mongolab hosted

https://mongolab.com/databases/firerating/collections/doors

Source code on GitHub

https://github.com/jeremytammik/firerating
https://github.com/jeremytammik/FireRatingCloud

All research extensively documented



## CompHound – Component Tracker

- Based on FireRating in the Cloud
- Less Revit, more web
- Work in progress

https://github.com/CompHound

https://comphound.herokuapp.com/datatable2



#### View and Data API Viewer

- REST server-side API to upload and translate
- JavaScript client API to view and manipulate

http://trial.dotdotty.com/share?shareId=431c-bac8-eedb-e43d-fc79&iframe=true



#### Questions?...

Session #44 – Cloud-based universal component and asset usage analysis, visualisation and reporting

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