

Graduate School of Architecture, Planning + Preservation  
Columbia University  
Spring 2012, Visual Studies

*APPROACHING CONVERGENCE 2012: ADVANCING EXCHANGE IN GRASSHOPPER*

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Course Website: <http://www.thediscontinuum.net/ac2012>

## OPERATION #1B: *outSOURCED OPERATIONS (Dynamic Interoperability)*

The goal for this final assignment is to realize the full extent of the research workflow proposed in Operation #0 and refined in Operation #1A. Groups are expected to utilize interoperational methodologies discussed in class and work sessions to formalize research and generate data-driven geometry and/or systems within Grasshopper. Each team must target specific strategies for introducing external data generation (input) and/or streaming Grasshopper data/geometry across platforms for evaluation/regeneration of data (output).

The ultimate objective is to develop and document an innovative approach to the realization of construct and workflow as a dynamic/unified/interoperable system. Thus, for Operation #1B students are required to produce an animation/video of dynamic processes in action (via Camtasia, CamStudio, similar screen recording software, or animated sequencing of output) and final renderings.

### REQUIREMENTS:

**Rhino/Grasshopper:** Multiple distinct + clearly-described (with Panel notes) Grasshopper operations  
Integration of Visualization, Drawing Production +/- Workflow tools  
Dynamic Cross-Platform Connectivity utilizing integrated plug-in or custom toolsets

### Deliverables (minimum required content):

03.01.2012

#### DUE PRESENTED IN CLASS

- + Process video: 1 to 2 minutes in length, 720x480 resolution, exported as .MOV  
Process videos should clearly document intent, structure, process + outcome of the research conducted over the course of the semester; this may include, but is not limited to the following:
  - ++ Screen capture / live video / animated sequencing of multiple softwares in dynamic communication
  - ++ Refined Workflow Diagrams
  - ++ Animated rendered sequences
  - ++ Still renderings/drawings/imagery
  - ++ Concept materials

03.23.2012

#### DUE POSTED TO COURSE WEBSITE + SUBMITTED ON CD/DVD

- + Refined workflow diagram (.pdf)
- + Matrix of possibilities/outcomes, rendered as vector or composite drawings from Rhino
- + One archival-quality rendered image at 2000x1500 minimum
- + Grasshopper .ghx definition + associated software files posted to course website
- + Website-quality images (480x320, 72dpi, .jpg) of workflow diagram, matrix + rendering

### GRADING:

Projects will be graded according to quality, clarity, intricacy and depth of operations, and creativity. This is an opportunity for you to demonstrate the soundness of your systems as a contribution to the collaborative body of research from the semester.