Session B: A4813 – Integrated Parametric Delivery

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Emerging technologies in architectural design find their own time and place to be implemented. Too often the tool controls the design. When utilized effectively, advanced parametric design methodologies will facilitate numerous iterations, enabling a more resolved final product in a time restricted setting. Designers often favor one tool over another, mainly out of familiarity. This workshop will insist on interoperability between various platforms, magnifying the strengths of each tool. We will investigate the process of integrating multiple parametric tools simultaneously into a single architectural project. Specifically, we will be designing and developing workflows. Quickly becoming the industry standard for BIM, Revit will be presented as the primary tool for hosting and documenting. However, most form generation and parametric control will be driven by whichever tool students select to examine as they develop their designs and integrate them into a single process. In previous semesters, students have designed workflows between Catia, Rhino/Grasshopper, TSplines, Evolute Tools, 3DS Max, Maya, Processing, and Vasari. Within the last year, new add-ins have enabled an extensive amount of control between Revit and Grasshopper(Hummingbird, Chameleon, and OpenNURBS, for example). Most of these add-ins live in Grasshopper but have been developed to interact specifically with Revit and Vasari. We will be analyzing where such tools might best be utilized and how they could impact iterative design. Both Revit and Rhino/Grasshopper will be emphasized and demonstrated simultaneously in lectures to highlight integration potential. A basic understanding of Revit is suggested—taking ReThinking BIM (Session A) is highly recommended.

Schedule:
WEEK 01 (10/24) - Lecture // Intro to Interoperability, Project Introduction
WEEK 02 (10/31) - Lecture // Workflow Design, Rhino & Grasshopper, Project Proposal
WEEK 03 (11/07) - Lecture // Help Sessions // Adv. Adaptive Components
WEEK 04 (11/14) - Lecture // Ecotect & Galapagos, Analysis and Optimization
WEEK 05 (11/21) - Lecture // Help Sessions // 3DS Max and Revit
WEEK 06 (11/28) - Lecture // Help Sessions // Dynamo
WEEK 07 (12/05) - Help Session // Desk Crit