

Algorithms and Urbanisms: SimCity 1&2

Instructor: Luc Wilson
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Spring 2015
Monday 9am - 11am
Room: 115 Avery

This course will investigate the range of algorithms, metrics and benchmarks increasingly used today for tracking the performance of cities. Students will begin by using the metrics available in SimCity to evaluate historic, ideal, and contemporary cities. They will next develop additional evaluation criteria--both quantitative and qualitative--they think lacking in SimCity but critical for understanding the performance of cities. Through this process, we will discuss the underlying urban assumptions and algorithms built into SimCity and how they impact a general understanding of the design and function of cities. This course will push students to understand, hybridize and eventually develop their own urban design theories and evaluation tools through imaginative elaborations on the game SimCity.

Students will give several 10 minute presentations throughout the semester concluding with a final review with invited guest critics. In addition to the presentations, students will be expected to engage in weekly discussions.

Each student will be provided a copy of SimCity

SESSION A: **Analysis and evaluation of established urban theories and design.**

After a broad overview of the elements and structure of cities, each student will be assigned a historic or ideal city (such as 1850's Paris or Broadacre City) and a contemporary city (Hong Kong or Seaside, Florida) to research, analyze and evaluate. They will first evaluate the cities using the metrics in SimCity, establishing performative benchmarks for each city. Next, they will define additional metrics and benchmarks that do not exist in SimCity. For each new metric they will be required to develop a way of measuring it in SimCity. Crucial to this exercise will be the evaluation of the city as it develops over time in its relation to the larger region.

Cities will be grouped (3-4) by theme. Each student will give a presentation (10 min) on their city. As possible, students should use live game play or diagrammed video/still capture of SimCity as the primary media for their presentation. In addition to the presentation, students will contribute to a shared library of city metrics that will be used in part 2 and 3.

Presentations on historic and ideal cities will happen first, followed by presentations on contemporary cities.



Broadacre City



York, England



Hong Kong

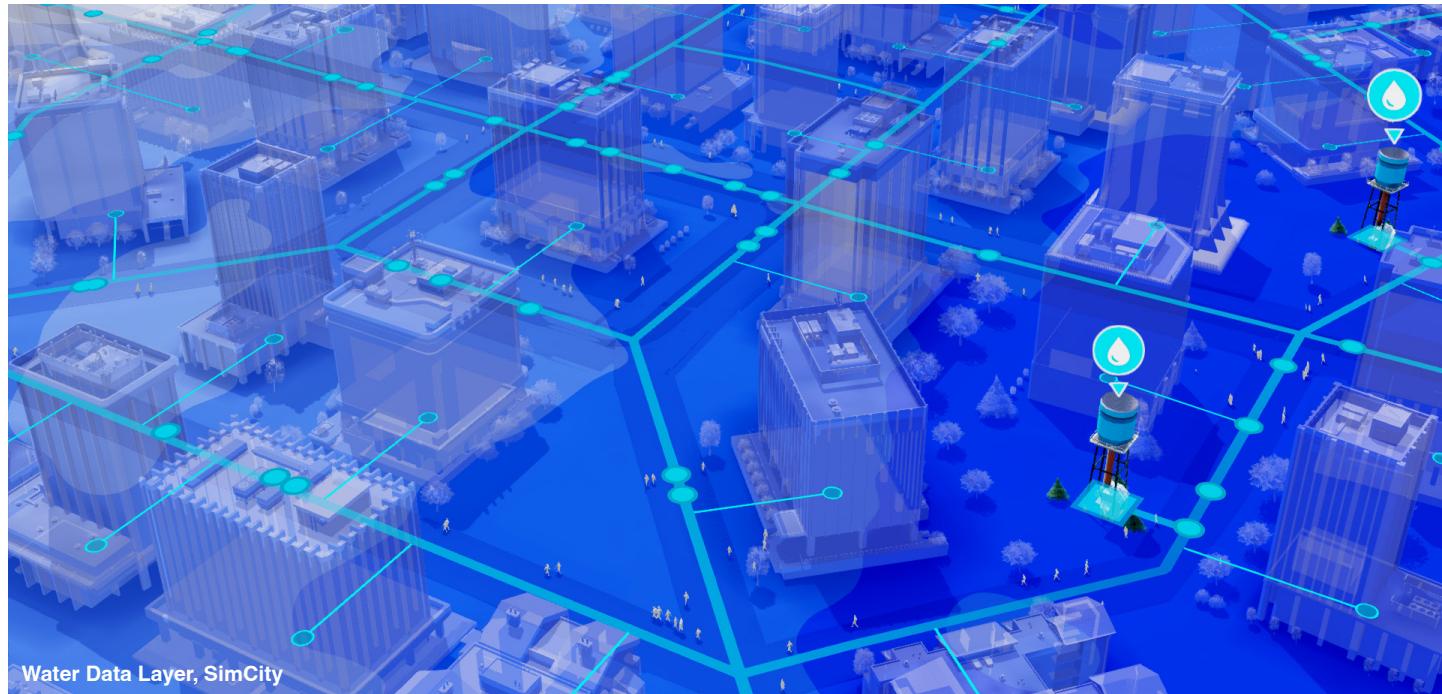
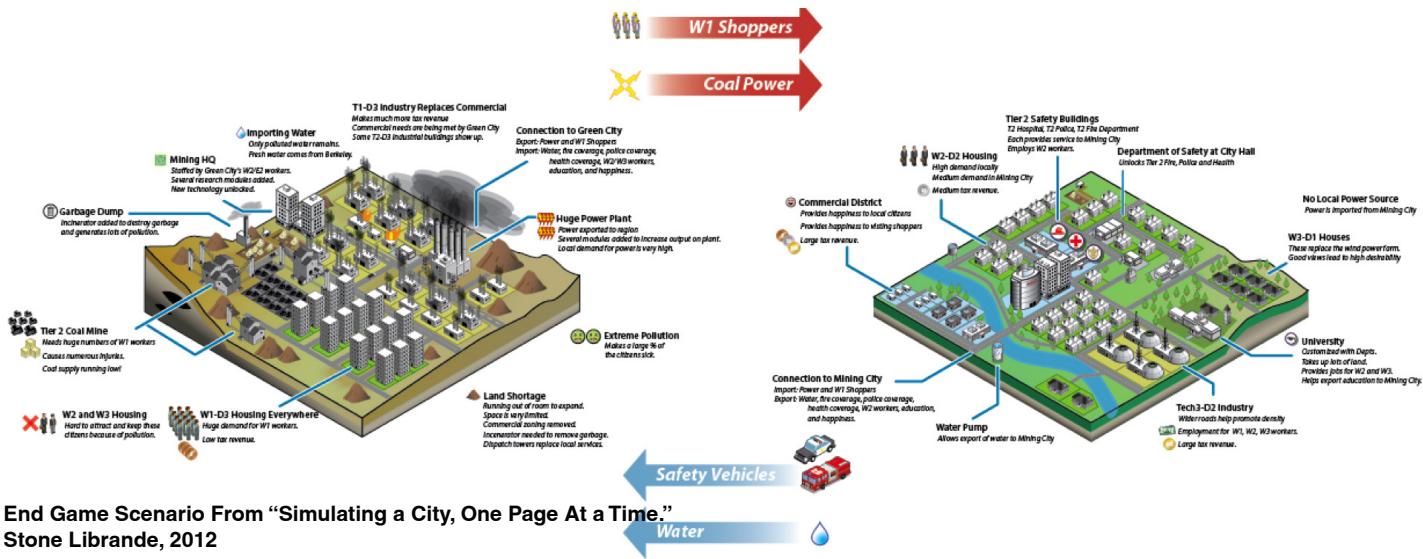
SESSION B

Combine, Hybridize and Translate.

In the first half of session B students will take elements from the cities and theories analyzed in session A and combine and hybridize them in SimCity. They can pick and choose from any city or theory studied, not just their own, using the established benchmarks as the method of hybridization.

New Urban Theories

Next students will propose and develop their own urban design theory using SimCity to iterate, test and experiment. While developing new urban theories, we will look at contemporary urban design work that uses digital visualization and evaluation techniques, such as X-Information Modeling and the working being done at the Center for Urban Science and Progress at NYU. In the end, they will propose ideal criteria and benchmarks for evaluating the performance of the city, applicable to both SimCity and real urban design.



PAST STUDENT WORK

Game Play Videos:

In the first half of session B students will take elements from the cities and theories analyzed in session A and combine and hybridize them in SimCity. They can pick and choose from any city or theory studied, not just their own, using the established benchmarks as the method of hybridization.

Mondrian Hsieh: http://youtu.be/WiunODQyw_0

Qiancheng Ma: <http://youtu.be/TZn9WPIVSMU>

Jinglu Huang: <https://www.youtube.com/watch?v=mtUCD2WmqHY&feature=youtu.be>

Louis Jin: <http://youtu.be/FnQxA15cCP0>



DEPENDENT CITIES

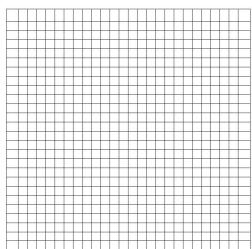
SIMCITY: ALGORITHMS AND URBANISM SPR 2014

MONDRIAN HSIEH MH3284

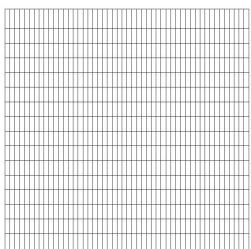
CITIES' BLOCK SIZE



San Francisco / Rio de Janeiro



Portland / Houston



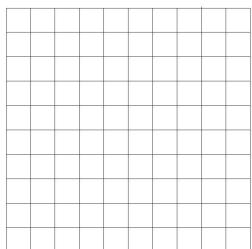
London



Miletus



Salt Lake City / Pudong



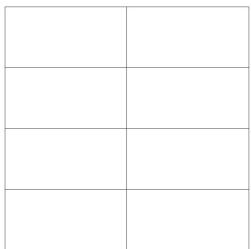
U.S. Standard Block



Manhattan



Chicago / Barcelona



Ancient Chang'an



Beijing

ÎLE DE LA CITE



ARC DE TRIOMPHE

