



AMATRIA
Sentient Architecture

*Katy Borner: Round-Table Conversation on Innovative Thinking.
Indiana University Jacobs School of Music September 8, 2018*



PBAI / LASG

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M6R2B2
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By	Date	Status	Rev By	Rev Date
JP	18/04/02	As-Built	TB	18/06/13

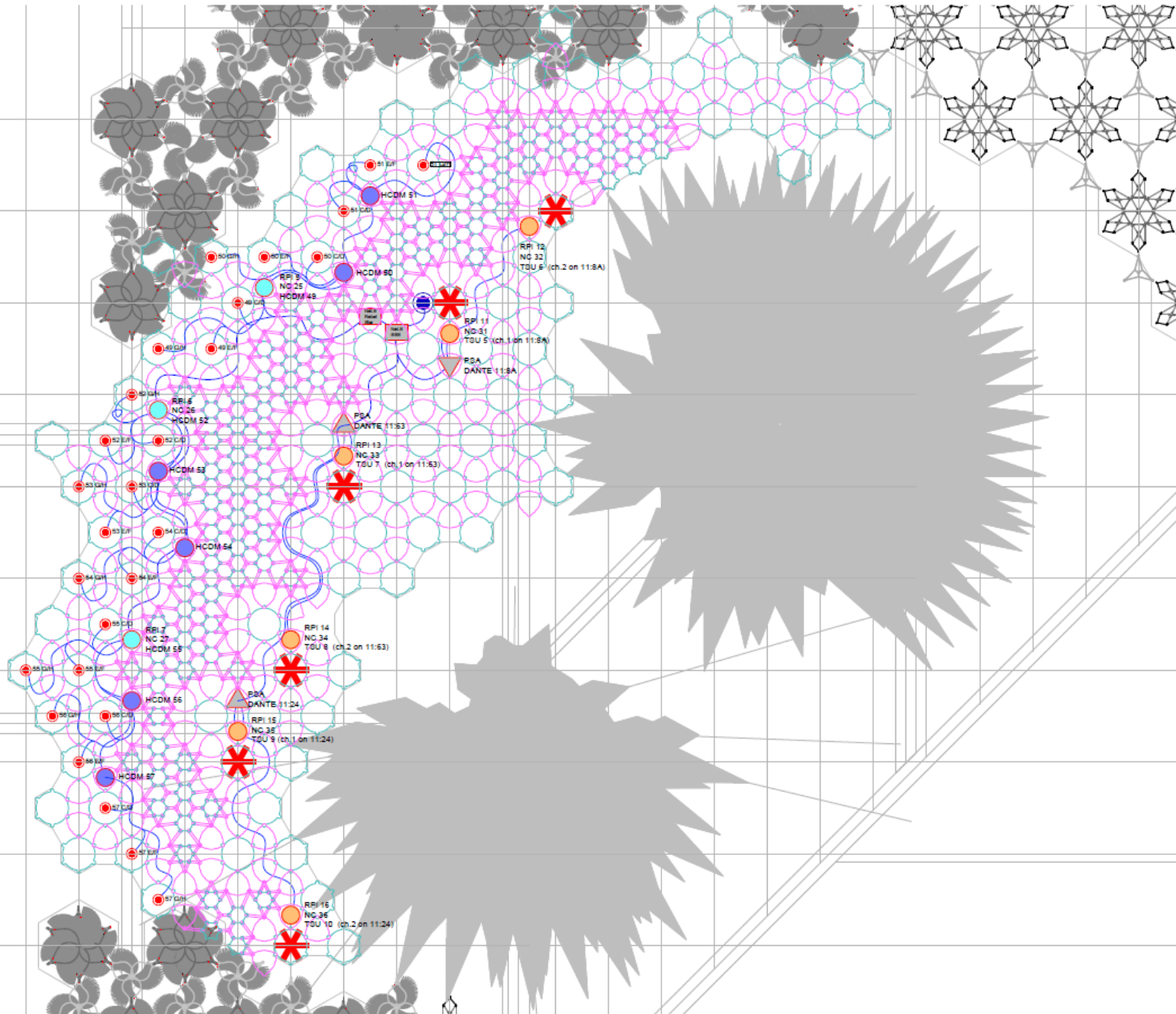
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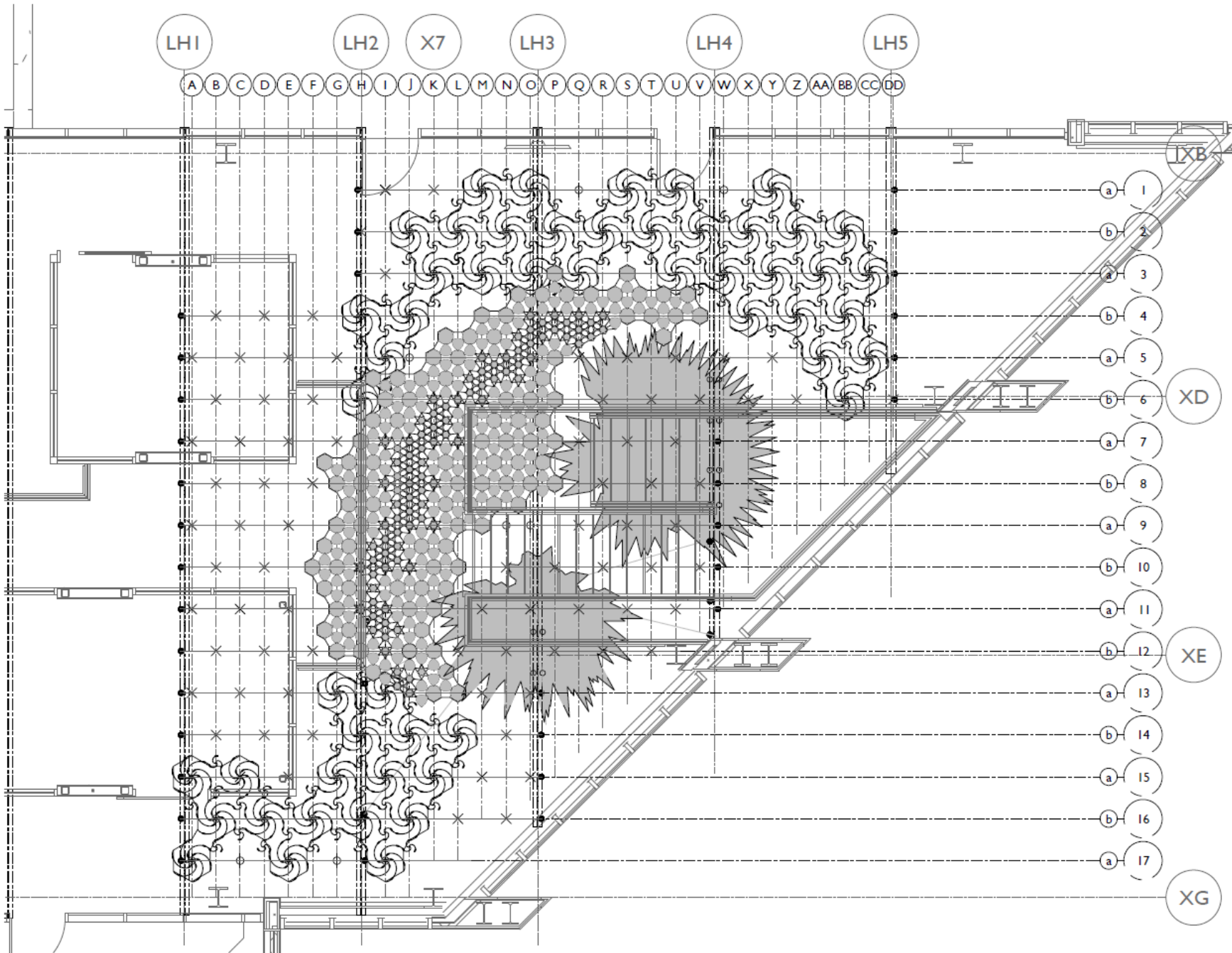
Phase
Maintenance Manual

Project
17540 Luddy Hall - Amatria

Drawing Title
Device Locator - Sparfield Canopy

Sheet
M102





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By	Date	Status	Rev By	Rev Date
TB	18/02/09	DRAFT	MF	18/02/09
TB	18/02/13	DRAFT	VF	18/02/13
TB	18/02/16	DRAFT	PB	18/02/16

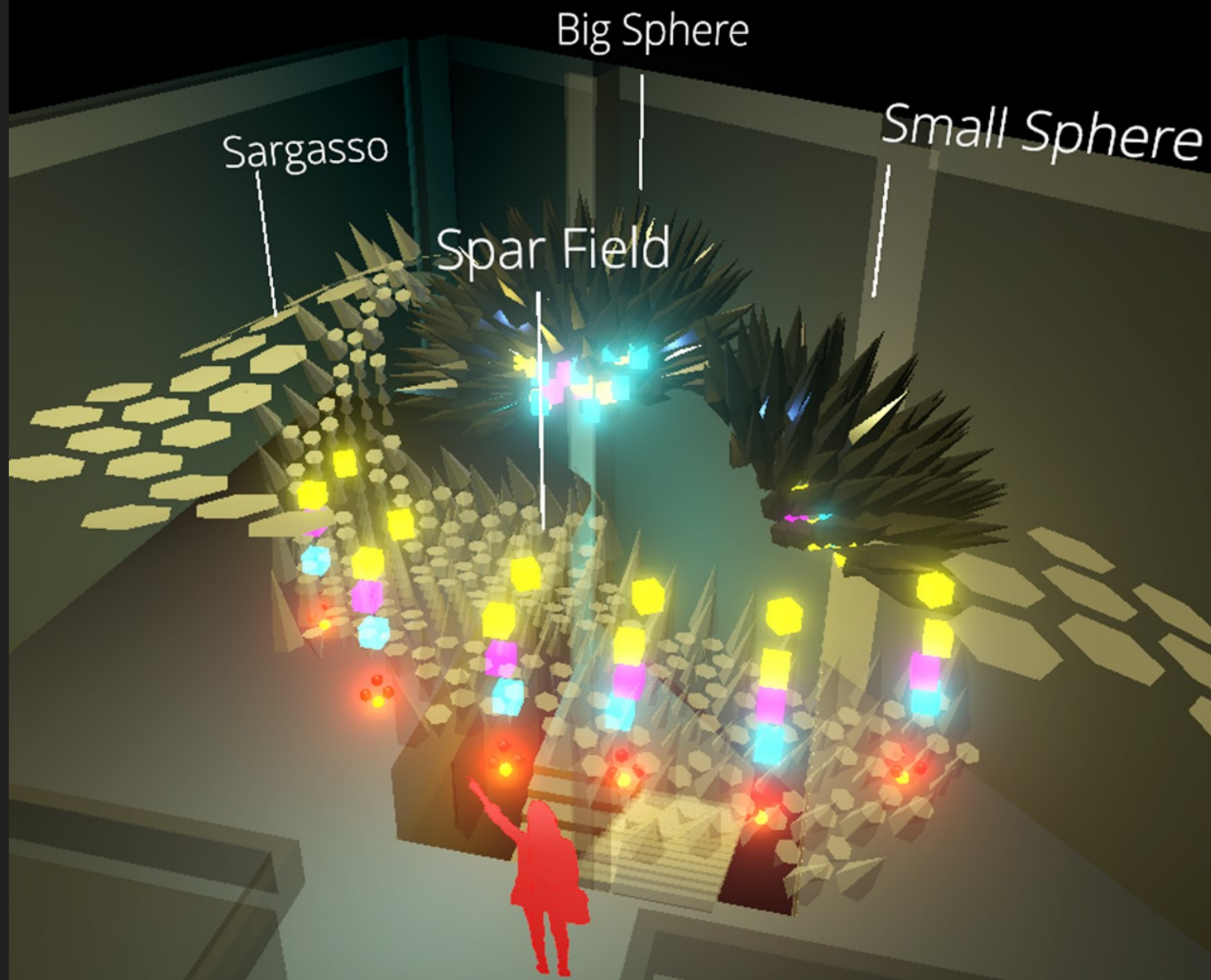
Notes

Phase
Schematic Design

Project
17540 Luddy Hall

Drawing Title
Sculpture Master Plan

Sheet
A102



Sargasso

Big Sphere

Small Sphere

Spar Field

Reset Camera

Open Story 2

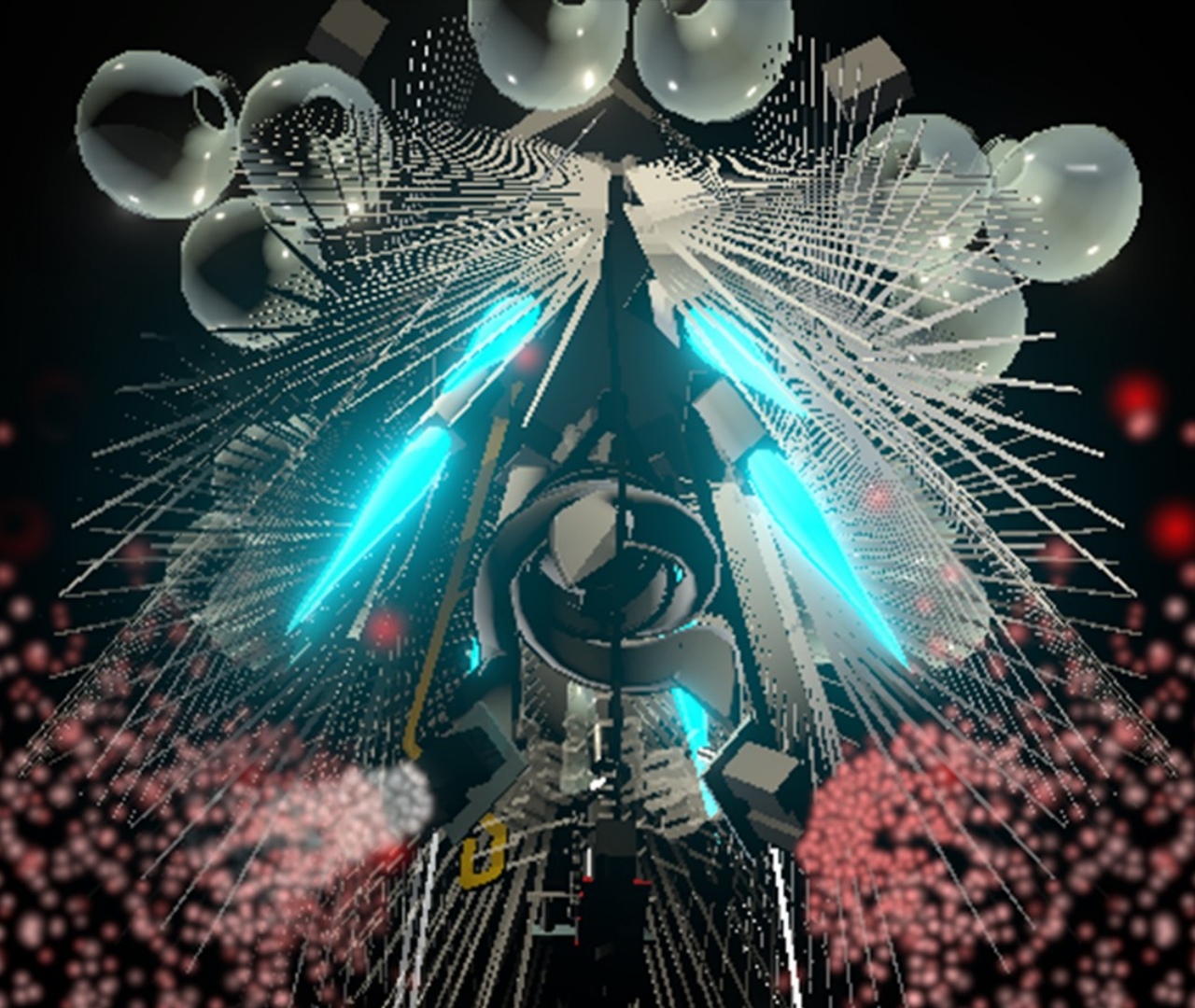
Show/Hide Overlay
Sargasso

Camera Left

Camera Right

Camera Top

AMATRIA
Sentient Architecture



IR Sensor

IR Sensor

IR Sensor

AMATRIA
Sentient Architecture

Related Events

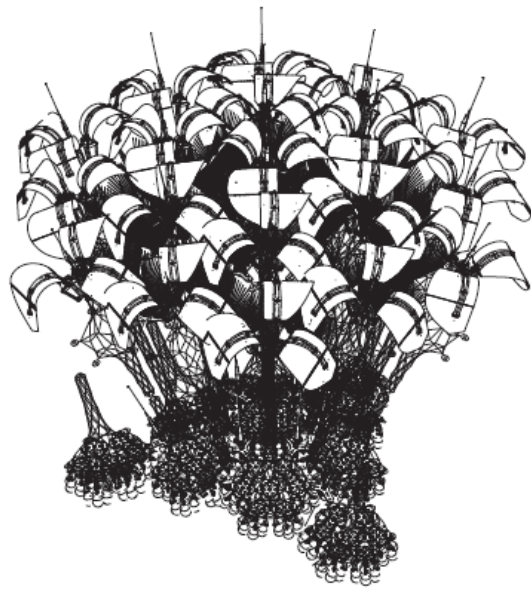
2018

- Oct 26-28 **OurCS Workshop/Conference**, Indiana University, Bloomington, IN
- Oct 10 Indiana University Foundation Board of Director's Welcome Reception, Indiana University, Bloomington, IN
- Sep 10 Amatria Public Tour (4:00pm–5:00pm), Indiana University, Bloomington, IN
- Aug 25 **Makevention** (10:00am–4:00pm), Monroe Convention Center, Bloomington, IN
- Aug 1 **NOAC Dendrite Workshop**, Indiana University, Bloomington, IN
- Jul 18 **Pathfinders/Infosys Open House**, Indiana University, Bloomington, IN
- Jun 19 Amatria Public Tour (2:30pm–3:30pm), Indiana University, Bloomington, IN
- May 21 Amatria Public Tour (4:00pm–5:00pm), Indiana University, Bloomington, IN
- May 3 Amatria Reserved Tour (1:30pm), Indiana University, Bloomington, IN
- May 1 Amatria Reserved Tour (10:30am), Indiana University, Bloomington, IN
- Apr 30 Amatria Reserved Tour (2:00pm), Indiana University, Bloomington, IN
- Apr 25 Amatria Reserved Tour (12:00pm), Indiana University, Bloomington, IN
- Apr 24 & 26 HON-H 241 Dendrite Building Session, Indiana University, Bloomington, IN
- Apr 11 VIP Reception before Amatria reveal, Indiana University, Bloomington, IN
- Mar 23-24 **CEWIT Summit**, Indiana University, Bloomington, IN
- Mar 2-3 Fashion Technology Symposium, Indiana University, Bloomington, IN

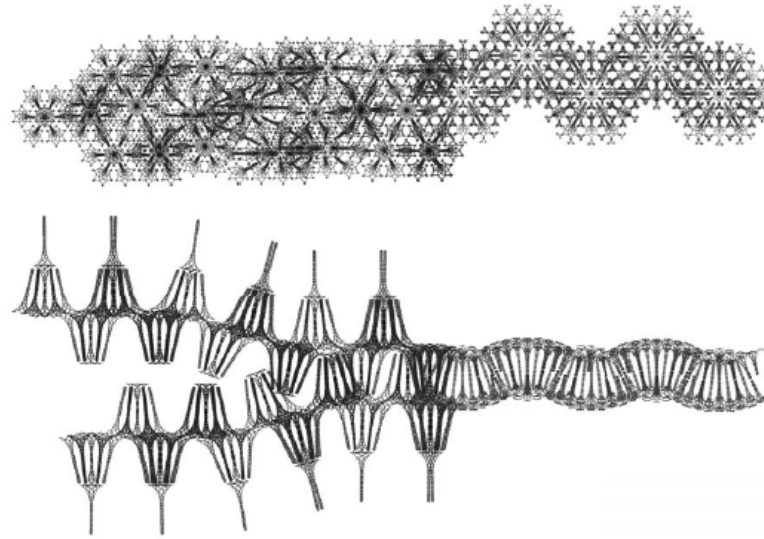
2017

<https://cns.iu.edu/amatria.html>

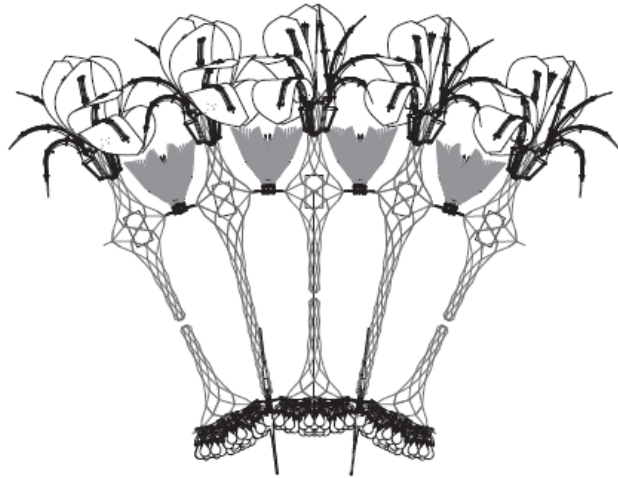
- Dec 5 & 7 ENGR 101 Dendrite Building Session, Indiana University, Bloomington, IN
- Nov 29-30 **FTC Conference**, Vancouver, Canada
- Nov 10-11 **CIS IEEE EnCON 2017**, Indiana University, Bloomington, IN



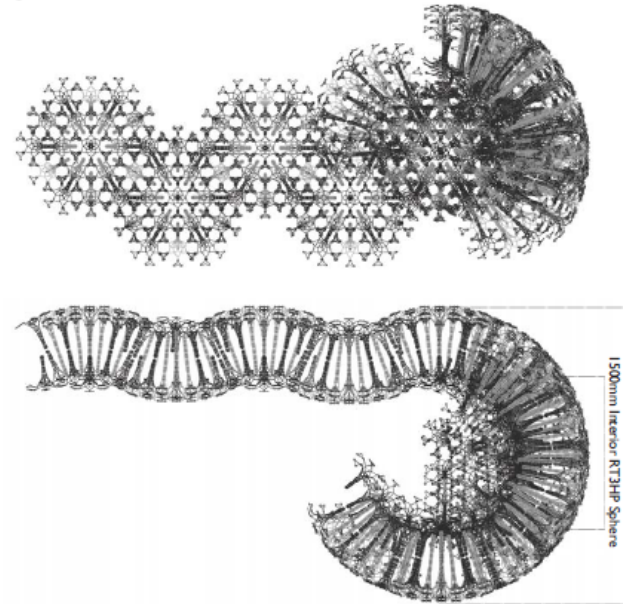
1 Axonometric of Schematic Sphere Unit



3 "Zipper" Transition between Space Truss Systems



2 Schematic Composition of Sphere Unit Assembly



4 Curling of Self-Supported Space Truss to Sphere

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By	Date	Status	Rev By	Rev Date
JJ	17/08/08	PIR		

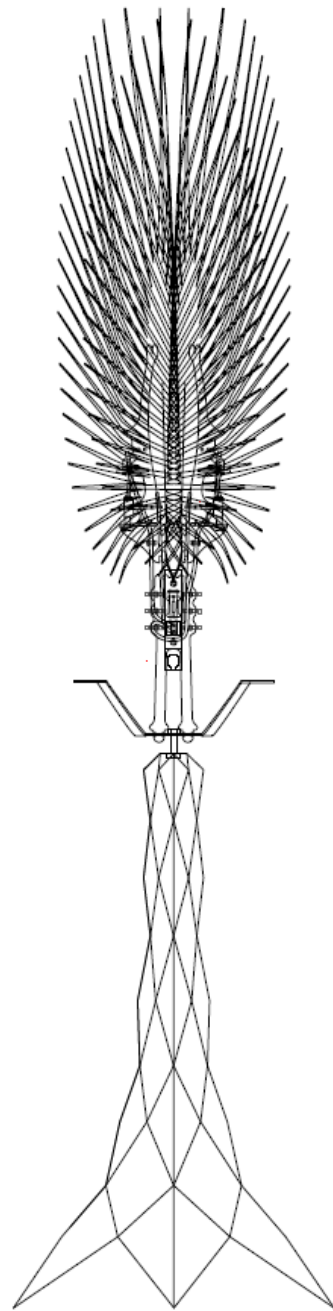
Notes:
PIR - Pending Internal Review

Phase:
Draft Schematic
Design

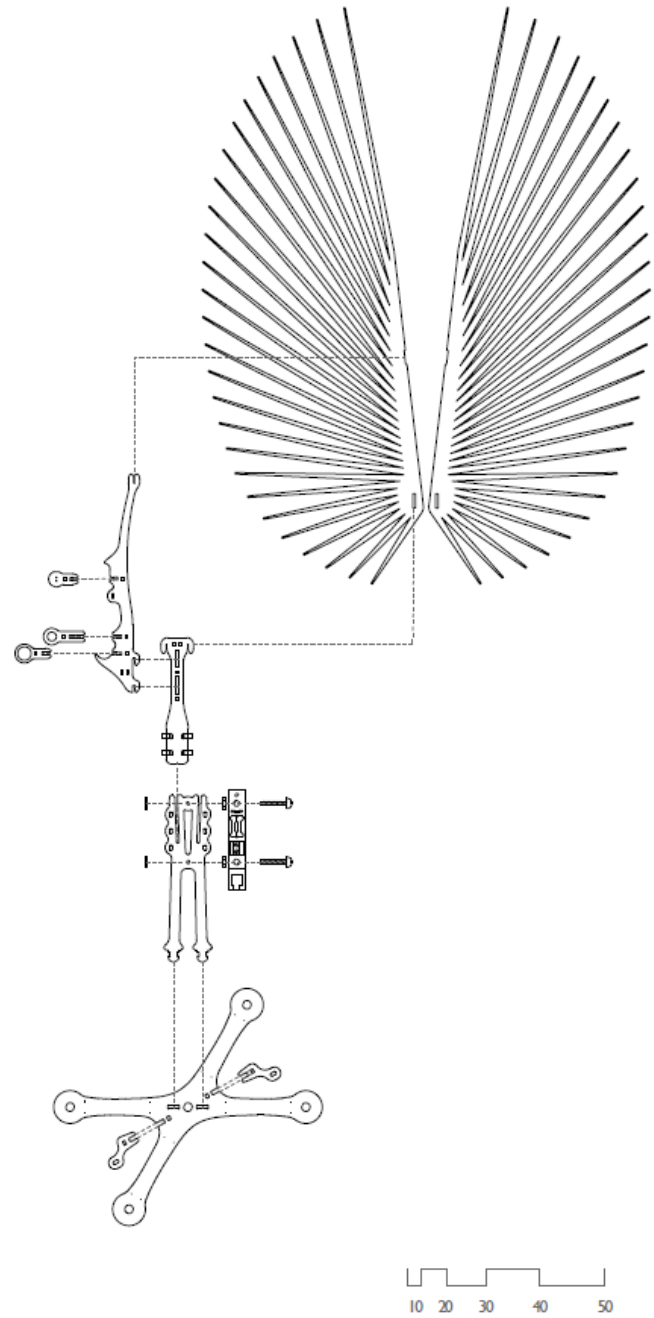
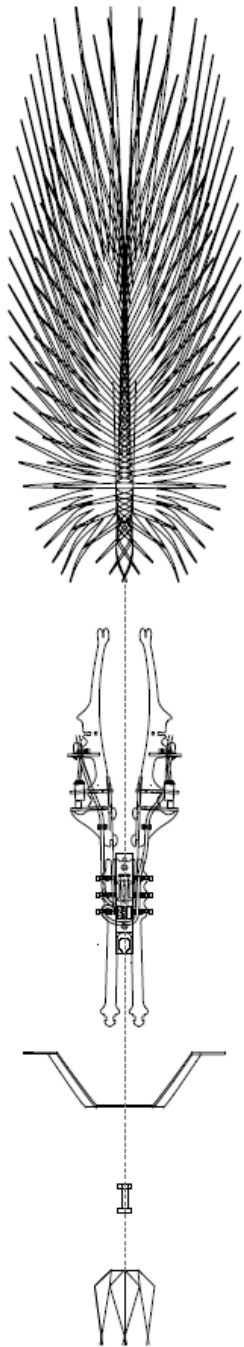
Project:
17538 DX EDIT

Drawing Title:
Expanded Assembly of Unit
Heirarchy and Scaffold
Assemblies

Sheet:
S101



Complete Assembly



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By	Date	Status	Rev By	Rev Date
MA	18/03/01	DRAFT	FB	18/03/01

Notes

Phase
Design Development

Project
17540 Luddy Hall

Drawing Title
300mm Kinetic Moth Assembly

Sheet
C101





Sentient architecture promises insight into our evolving relationship with AI

Carolyn Beans, *Science Writer*

As the sun set on April 11, 2018, around 400 people gathered in Indiana University's Luddy Hall, anticipating a sort of birth. There, in the home of the School of Informatics, Computing, and Engineering, all eyes pointed to *Amatria*, a woven cloud of white Mylar and clear acrylic plastics, wire, glass, laser-cut stainless steel, and electronics hanging from the glass ceiling.

This new work of "sentient architecture" by multidisciplinary researcher and artist Philip Beesley of the University of Waterloo and colleagues hung still. Then Beesley reached up. Sensing his movement, *Amatria* shuddered. Vibrations near Beesley's hand rippled outward accompanied by bursts of warm light and sounds ranging from otherworldly dinks and bellows to natural gurgles and hisses.

Amatria is at once art installation, architectural prototype, and test bed for artificial intelligence. Beesley created the sculpture in collaboration with researchers at Indiana University, as well as electrical engineer Rob Gorbet of the University of Waterloo and other members of Beesley's Living Architecture Systems group (LAS), which includes an international team of 90 architects, scientists, engineers, and sound artists.

The goal of the LAS group is to make buildings come alive, revolutionizing built spaces and our relationships with them. The group aspires to create an architectural structure that is more integrated with the natural world, a metabolism that enables self-renewal, and an artificial intelligence capable of curiosity and even empathy.



Amatria, a new work of "sentient architecture" by Philip Beesley and others in LAS, is at once art installation, architectural prototype, and test bed for artificial intelligence. Image courtesy of Philip Beesley (photographer).

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