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## Information about the Multimedia Material

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**File Name(s)**

Please list all file names.

Beam.jpg

Cheekwood.jpeg

CompetitionEntries.m4v

CompetitionWinners.m4v

CurveAppeal1.jpg

CurveAppeal2.jpg

Enterprise.jpg

FinishedSample.jpg

RoboticPrinterv1.jpg

RoboticPrinterv2.jpg

**Brief Description**

For each multimedia item, please include a brief non-technical description, which will be used for writing captions. Use a separate page for additional space.

Beam.jpg - initial test of a digitally optimized beam created by Cellular Fabrication (CFAB®) Freeform 3D Printing, created by Branch Technology with support from the National Science Foundation

Cheekwood.jpeg - printed portion of the 'Casa D'Espanya' outdoor playhouse designed by Gould-Turner Group for the Cheekwood Botanical Gardens in Nashville TN

CompetitionEntries.m4v - a short video of the top 50 finalists from around the world who submitted designs for Branch Technology's Freeform Home Design Challenge, which invited the public to design the first house to be constructed by Branch starting in 2017

CompetitionWinners.m4v - a short video featuring the 1st, 2nd, and 3rd prize winning designs from the Freeform Home Design Challenge

CurveAppeal1.jpg - Board 1 of 2 showing the 1st prize winning design from WATG of Chicago, which Branch will begin to construct in 2017

CurveAppeal2.jpg - Board 2 of 2 showing the 1st prize winning design from WATG of Chicago, which Branch will begin to construct in 2017

Enterprise.jpg - A series of movable interior partitions featuring a 3D topographic map of the Tennesee River and the Chattanooga area, which Branch created for Chattanooga's Enterprise Center for small business development.

FinishedSample.jpg - An example of a complex shape printed using CFAB® technology which has been filled and finished with conventional building materials to create a final composite structure.

RoboticPrinterv1.jpg - The first robotic printer used by Branch in late 2014 to develop the initial proof of concept for CFAB® prior to SBIR Phase I research.

RoboticPrinterv2.jpg - The second robotic printer now used by Branch to 3d print the core component of CFAB® building components at full scale, with development support provided by NSF SBIR Phase I. The printer has a build volume of over 3000 cubic feet, and is capable of printing components up to 50 feet in length.

**Keywords**

Include any relevant keywords. Use a separate page for additional space.

3D printing, additive manufacturing, Cellular Fabrication®, CFAB®, plastics extrusion, industrial robotics, robotic construction, direct digital fabrication, CAD-CAM manufacturing, automation, algorithmic design, parametric design, sustainability, architecture, composite construction, digitally augmented construction, conventional building materials

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Branch Technology (additional image credits listed in image captions)

**Related URL(s)**

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**Does This Material Show NSF-Supported Research?** Yes  No

If yes, please explain and, if possible, provide the NSF grant number.

Branch received NSF SBIR Phase I funding in July 2015

Grant # 1520482

**Date Of Material**

Please narrow down the creation date as closely as possible, even if you can give only the decade.

January 2015 - May 2016

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