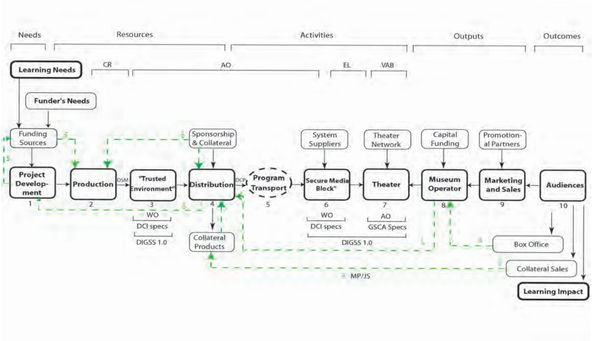
DIGSS

DIGSS: Digital Immersive Giant Screen Specifications

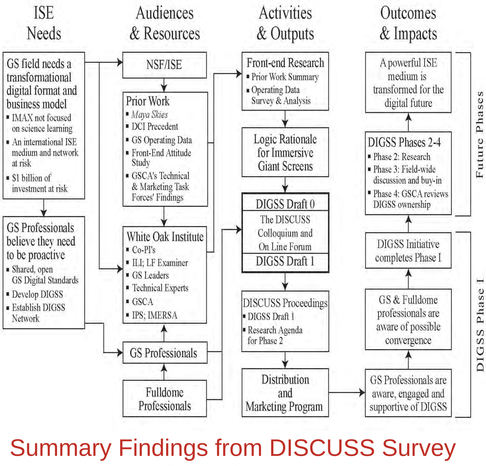
- A standard of exchange for an ISE learning platform
- Superior image, theater geometry, and size for museum-quality immersive learning
- An open-access, field-based process modeled on the Digital Cinema Initiative (DCI) that converted commercial from film to digital
- ISE museums with giant-screen theaters have a way to transition from film to digital

DISCUSS: Digital Immersive Screen Colloquium for Unified Standards and Specifications convened giant-screen industry leaders and technical experts on June 14-16, 2010 to develop a draft of the DIGSS followed by extensive field-wide input via online wiki and during conferences. DIGSS 1.0 is now recognized by the majority of museum GS professionals (the primary audience) and adopted by the field's professional association, the GSCA.

Logic Rationale: Museum GS Films and Theaters



Logic Model

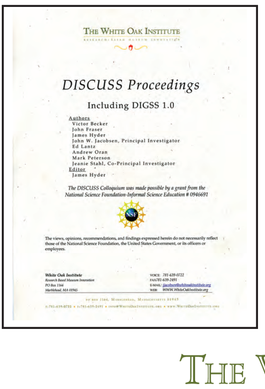


Current and Future Business Models

	Analog Current Scenario	Digital - Future Scenarios					
		1	2	3	4	5	6
ASSUMPTIONS (in 2010 Dollars)	35% non-equity funds	35% non-equity funds	0% non-equity funds	35% non-equity funds	0% non-equity funds	35% non-equity funds	0% non-eq funds
Average number of films per year	4.77	5.00	5.00	5.00	5.00	5.00	5
Film Productions Costs	$6,500,000	$9,000,000	$9,000,000	$6,000,000	$6,000,000	$3,600,000	$3,600,0
RESULTING MODELS BASED ON THE ASSUMPTIONS							
Summary of Goal for Return on Investment and Start-up Distribution Costs							
Start-up Distribution Costs per Film	$850,000	$850,000	$850,000	$850,000	$850,000	$850,000	$850,0
Debt Repayment - Principle and Interest	$747,500	$1,035,000	$1,035,000	$690,000	$690,000	$414,000	$414,0
Equity Funds to pay back	$3,575,000	$4,950,000	$8,100,000	$3,300,000	$5,400,000	$1,980,000	$3,240,0
Return on Equity to pay back investors	$1,358,500	$1,881,000	$3,078,000	$1,254,000	$2,052,000	$752,400	$1,231,2
Total Minimum Needed for Net Revenue per Film	$6,531,000	$8,716,000	$13,063,000	$6,094,000	$8,992,000	$3,996,400	$5,735,2
Calculated Annual Lease Fees and Producer's Net Revenue							
Current Model Based on Total 193 Theaters in Network Showing Classic Films on a Regular Basis							
Future Model Based on Assumption of # of Thtrs in Network, 5 Films / Year and Revenue Goal per Film							
Total U.S. annual lease payments for all Classic Films per Year	$15,671,600	$20,170,080	$30,161,740	$14,128,800	$20,787,200	$9,938,880	$13,251,8
Total International annual lease payments for all Classic Films per Year	$22,096,956	$28,439,813	$42,528,053	$19,921,608	$29,309,952	$14,013,821	$18,685,0
Total Global Annual lease payments for all Classic Films per Year	$37,768,556	$48,609,893	$72,689,793	$34,050,408	$50,097,152	$23,952,701	$31,936,9
Plus Ancillary Revenue	$3,776,856	$9,721,979	$14,537,959	$6,810,082	$10,019,430	$4,790,540	$6,387,3
Total Revenue to Distributor	$41,545,412	$58,331,871	$87,227,752	$40,860,490	$60,116,582	$28,743,241	$38,324,3
Less Distributor's share (exclusive of start-up distribution costs) 25%	$10,386,353	$14,582,968	$21,806,938	$10,215,122	$15,029,146	$8,622,972	$9,581,0
Producer's Net Revenue and Pre-Distribution Start-Up Costs	$31,159,059	$43,748,904	$65,420,814	$30,645,367	$45,087,437	$20,120,269	$28,743,3
Producer's Net Revenue and Start-up Distribution Costs per Film	$6,531,000	$8,749,781	$13,084,163	$6,129,073	$9,017,487	$4,024,054	$5,748,6
Goal for Producer's Net Revenue and Start-up Distribution Costs per Film	$6,531,000	$8,716,000	$13,063,000	$6,094,000	$8,992,000	$3,996,400	$5,735,2
Variance	$0	$33,781	$21,163	$35,073	$25,487	$27,654	$13,4
Annual # Films supported by the network	4.77						
Goal of Annual # Films Supported by the Network	n/ap	5.02	5.01	5.03	5.01	5.03	5
Number of Theaters Needed to Support 5 Films	n/ap	216	323	174	256	144	3
Calculated Total Network Annual Attendance	36,477,000	n/av	n/av	n/av	n/av	n/av	n
"Free Money" Needed / Yr (grants, sponsors, etc.) (fee $ x films / yr)	$10,853,906	n/av	n/av	n/av	n/av	n/av	n
Cost of Impact / Visitor (free $ / total attendance)	$0.30	n/av	n/av	n/av	n/av	n/av	n

Summary Findings from DISCUSS Survey of GS Theaters

	Theaters Showing					
	Predominantly Classic			Predominantly DMR		
Categories Present Data Averages	Classic Only	DMR Only	AVG both Formats	Classic Only	DMR Only	AVG both Formats
Screen Hours per Year (DMR 2 hours)	2,515	632	2,768	1,144	2,473	3,617
% of Screenings Hours per Year	n/a	n/a		36%	64%	100%
Annual Theater Attendance	189,000	23,000	202,000	83,000	151,000	235,000
Visitors in Seats per Screen Hour	76	72	n/a	74	99	n/a
Annual Admissions Revenue	$1,021,000	$255,000	$1,170,000	$405,000	$1,714,000	$2,119,000
Average Ticket Price (ATP)	$5.25	$8.94	n/a	$5.13	$11.33	n/a
Less AVG Lease and Print Costs/Capita	$ 3.77	$ 4.52	n/a	$ 2.88	$ 4.68	n/a
Net ATP after Lease and Print costs	$1.48	$4.43	n/a	$2.25	$6.65	n/a
Admissions Revenue/Screen Hour	$403	$222	n/a	$468	$637	n/a
Less Lease and Print Costs/Screen Hour	$108	$95	n/a	$191	$394	n/a
"Net" Admissions Rev./Screen Hr.	$295	$127	n/a	$276	$243	n/a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DISCUSS Proceedings

Including DIGSS 1.0

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John W. Jacobson, Principal Investigator
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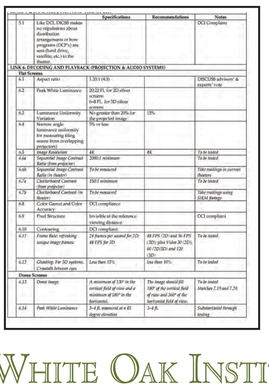
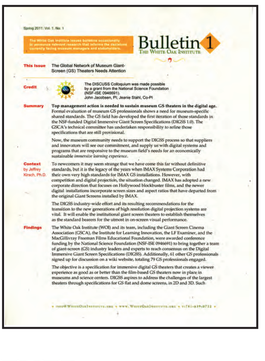
The DISCUSS Colloquium was made possible by a grant from the National Science Foundation Informal Science Education # 0966695

The views, opinions, recommendations, and findings expressed herein do not necessarily reflect those of the National Science Foundation, the United States Government, or its officers or employees.





THE WHITE OAK INSTITUTE

RESEARCH-BASED MUSEUM INNOVATION

1.0

The DISCUSS Colloquium was made possible by a conference grant from the National Science Foundation (NSF-ISE 0946691)
John W. Jacobsen, PI
Jeanie Stahl, Co-PI

Outcomes

1. The Institute for Learning Innovation's (ILI) summative evaluation found that "The DISCUSS conference project achieved the outcomes as outlined in the original grant proposal." (Fraser, J. Foutz, S. & Hershorin, K., 2012).
2. The Giant Screen Cinema Association (GSCA) accepted stewardship of DIGSS 1.0 with the goal of further developing the recommendations. (September, 2011)
3. The Reuben H. Fleet Center launches a "DIGSS GSX™ "system to complement their IMAX® film.
4. Peoria Riverfront Museum includes the first new DIGSS-compliant digital GS Theater (3D flat, 70x52).

Technical Experts & Project Team:

Victor Becker, Theater Geometry
John Fraser, Evaluator
James Hyder, Editor
John Jacobsen, PI
Ed Lantz, Playback
Andrew Oran, Distribution
Walt Ordway, DCI Process & Standards
Mark Peterson, Business Model
Christopher Reyna, Recording
Jeanie Stahl, Business Model and Co-PI

Deliverables: Colloquium (pictured) and online-forum; and the DISCUSS *Proceedings*

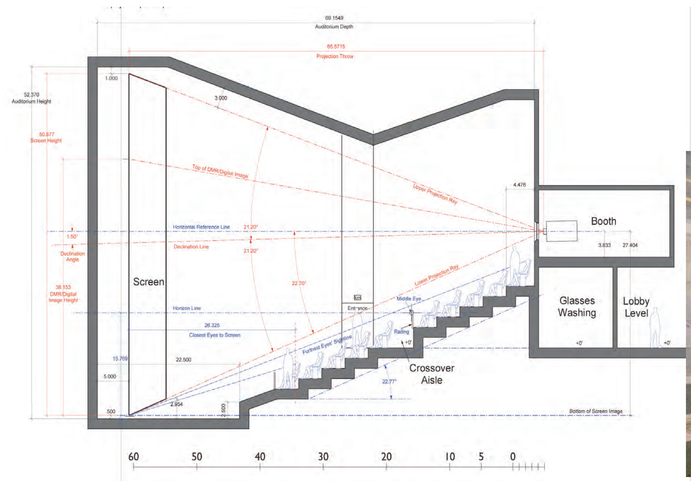
Project Advisors (title/positions at the time)

Diane Carlson, Pacific Science Center
David Duszynski, Cincinnati Science Ctr.
Mark Katz, National Geographic Society
Doug King, St. Louis Science Center
Jeff Kirsch, Fleet Science Center
Greg MacGillivray, MFFEF
Toby Mensforth, Smithsonian Institution
Tammy Seldon, GSCA

Organizational Partners

Giant Screen Cinema Association (GSCA)
Institute for Learning Innovation (ILI)
LF Examiner
MacGillivray Freeman Films Educational Foundation (MFF-ED)
Association of Science-Technology Centers (ASTC)
International Planetarium Society (IPS)

Theater Geometry: DIGSS Compliant



The section represents theater sightlines for an eye-filling immersive experience that complies with DIGSS' theater geometry.

The Peoria Riverfront Museum's Giant Screen theater is in construction for a DIGSS-compliant theater on October 20, 2012.

The White Oak Institute

RESEARCH-BASED MUSEUM INNOVATION

The mission of the White Oak Institute is to further innovation in the museum field through research, analysis, process management, and dissemination of data-based findings drawn from museum operations.

The White Oak Institute is a non-profit formed by the owners/principals of White Oak Associates, Inc.
Our focus is on museums as institutions and on the museum field and its sub-sectors as communities of practice, particularly ISE museums

WWW.WHITEOAKINSTITUTE.ORG
John W. Jacobsen, CEO
Jeanie Stahl, COO
Rebecca Robison, Project Manager
Karen Hefler, Logistics Coordinator

Current White Oak Institute Initiatives

Museum Impact, Operations and Performance Indicators (MIOPI): A colloquium to explore developing an integrated and shareable menu of indicators for measuring a museum's impact, operations and performance (in review).

The Museum Landscape Exploration Initiative (MLExI): A research initiative to advance knowledge about the ISE museum sector as a national generator of public impact and value (in review).

The Museum Operating Data Standards (MODS) Initiative: in partnership with the American Association of Museums (AAM) (in progress).

The Creation Project: A multiple platform (transmedia) immersive ISE learning campaign engaging science and religion organizations and spokespeople in saving The Creation (based on E. O. Wilson's book), by promoting public engagement in existing public action solutions.

Recently Completed White Oak Institute Initiatives

Key Indicators and Ratios Benchmarking Calculator: Project led by the Association of Children's Museums with support from The White Oak Institute. Funded by the Institute of Museum and Library Services (substantially complete).

Recommended Data Collection Fields for Museums Count: The IMLS National Museum Census. The Institute of Museum and Library Services selected WOI and our sub-contractor AAM in a national RFP to recommend over fifty standardized data collection fields (completed, March, 2011).

DISCUSS & DIGSS 1.0 (NSF ISE 0946691) (Substantially complete)