26 08.01.03

ACMI **Screen Lounges**: Progress report on design

From Crowd Productions: A report on progress and outline of research, design and construction work to 16.12.2002

01.] **Consultation with ACMI Stakeholders: A meeting with John Smithies, ACMI stakeholders, CMR and PiVoD.**
16.12.02. On Monday 16 December we met with ACMI stakeholders, CMR and PiVoD to discuss the development of the Screen Lounge design and construction. Crowd was advised that the Memory Grid build budget was not available for the construction of the Screen Lounge Pods or the Memory Grid Lounge Pods. Crowd was asked to present a budget detailing the number of Screen Lounge Pods and Memory Grid Pods that could be built for the build budget originally set aside for the Screen Lounges. In discussion with John Smithies and CMR it has been agreed that Crowd will build five Lounge Pods in total. This will be made up of two three-seater Memory Grid Lounge pods, two open top three-seater Games Lounge pods and one three-seater Screen Lounge pod along with ten partition screens. Crowd was advised that the request for purchase for the construction of the frames for the Screen Lounge Pods and the Memory Grid Pods has been approved. On the basis of this approval and the approval by John of our revised budget of 16.12.02 Crowd has commenced construction of the frames.

02.] **Report on design progress: Development of prototype structures for the Inflatable Ceiling.**
14.12.02. On Saturday 14 December Crowd met with Bedggood canvas to review progress of the design development to date. Bedggood have produced four new pneumatic structural prototypes to assess strength and form, particularly the securing of smooth edges for a clean finish and to ensure a reasonable acoustic seal to the connecting boundary between the inflatable ceiling and the walls of the Lounge Pods. The different architectures are displayed below. Additional to these further work was done analysing various samples and the resulting observations were incorporated into a final fifth prototype specifically to consider the performance of different edge details. This prototype also contains internal baffles rather than being composed of chambers that are circular in section. It was felt that a baffle based structure is dimensionally more stable when inflated and creates less deformation along the edges and at the corners.

Inflatable ceiling prototypes showing four different structural approaches to construction. All are based on the same flat trapezoid pattern and show varying deformation.

Left: Three examples of commercially available inflatables showing different corner treatments and the use of internal baffles.

Inflatable ceiling prototype showing three different approaches to corner construction and detailing. Above right: Inflatable prototype with internal baffles.

03.] **Consultation with fabricators and consultants on fabrication techniques: Inflatable Ceiling.**

20.12.02. On Friday, December 20 we presented our inflatable ceiling design prototypes to Peter Lim from Skyspan Pacific, international fabricators of inflatable structures, to obtain further advice on how to develop and refine our approach. Peter has directed us to a UK based fabrication company, Tensys, who have shape finding software to create membrane cutting patterns, especially set up to facilitate the construction of inflatable structures. This software automatically compensates for the distortion inherent in inflatable structures. Having focused on the particular fabrication problems we face in designing and constructing the inflatable ceiling elements for the ACMI Screen Lounges through our prototyping work we are ready to prepare a final design. This will be submitted to Tensys for a quotation to have the cutting pattern output for our local fabricator to construct.

04.] **Report on construction progress: Laser and Waterjet cutting of frame components.**

19.12.02. On Thursday December 19 GSA Waterjet cutting and MTM Celsiunator were briefed on cutting of components for the metal frames for the Screen Lounge Pods and the Memory Grid Pods. This cutting is done from CAD patterns that Crowd productions has prepared. Waterjet cutting is used for the aluminium components as generally Laser cutting fabrication suppliers will not cut aluminium. Waterjet cutting is available in three grades of finish, the finest grade of finish involves the slowest pass of the Waterjet cutting heads. Ironically this means that often very heavy gauge aluminium will have the best edge and surface finish when cut using Waterjet methods. This architectural grade of cut has been specified on our components. Once this cutting has been completed the components will be couriered to the principal metal fabricator.

Samples of Waterjet cut components. Note the very fine finish on the aluminium block that has been cut on the right.

05.] **Report on construction progress: Briefing Riva Fabrication.**

07.01.03. On Tuesday January 07 Michael Trudgeon and David Poulton met with Riva Fabrication to brief them on construction of the metal frames for the Screen Lounge pods and Memory Grid Pods. Laser cut and waterjet cut components will be delivered to Riva Fabrication on Friday January 10 and Thursday January 16 respectively. Construction of the frames will commence on Wednesday January 08

05.] **Report on design progress: Consultation with Peter Clarke.**

02.12.02. Crowd has been in discussion with architectural, product and portrait photographer Peter Clarke to develop a brief and photographic strategy for the images to be used in the clear acrylic Blister pack Memory wall. This exhibition space is to be used to capture the idea of a domestic space within the Screen Lounge Pods. Notions of activity, blur, detail, fragment and memory are key concerns to create an indeterminate familiarity. The idea here is also to comment on the idea of the camera as a prosthetic extension of memory, a kind of symbolic baggage about connection and identity. Peter will respond in February with a proposal for the work