

24

02.12.02



ACMI Screen Lounges: Progress report on design

From Crowd Productions: A report on progress and outline of research, design and construction work to 02.12.2002

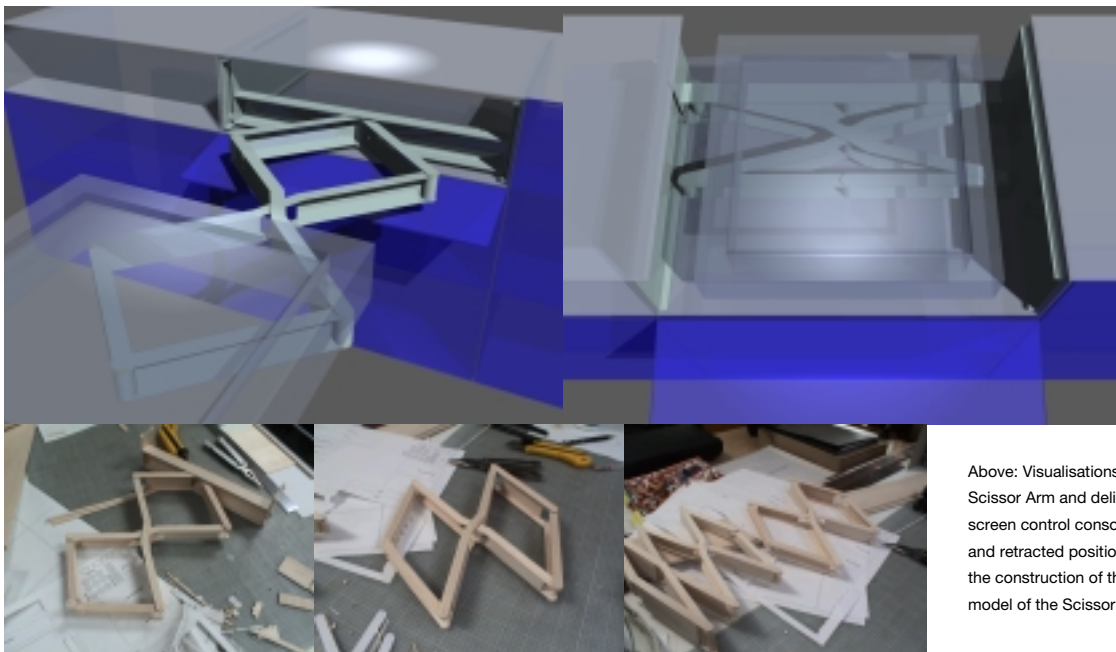
01.] Report on Design Progress: Developing the Scissor Arm touch screen control console delivery system.

Work has begun on a revised design of the Scissor Arm touch screen control console delivery system as discussed in report 23. The design illustrated shows the new sliding platform acting as the first stage of the delivery system.

We have tested the folding geometry and reach to ensure that the new design delivers the touch screen to the users as before.

The sliding platform is fabricated from brake-press folded stainless steel and the key roller bearing components are being sourced from skateboard wheel bearing manufacturers. Rob Ivanic from Riva Fabrications is currently costing the construction of a full scale working prototype.

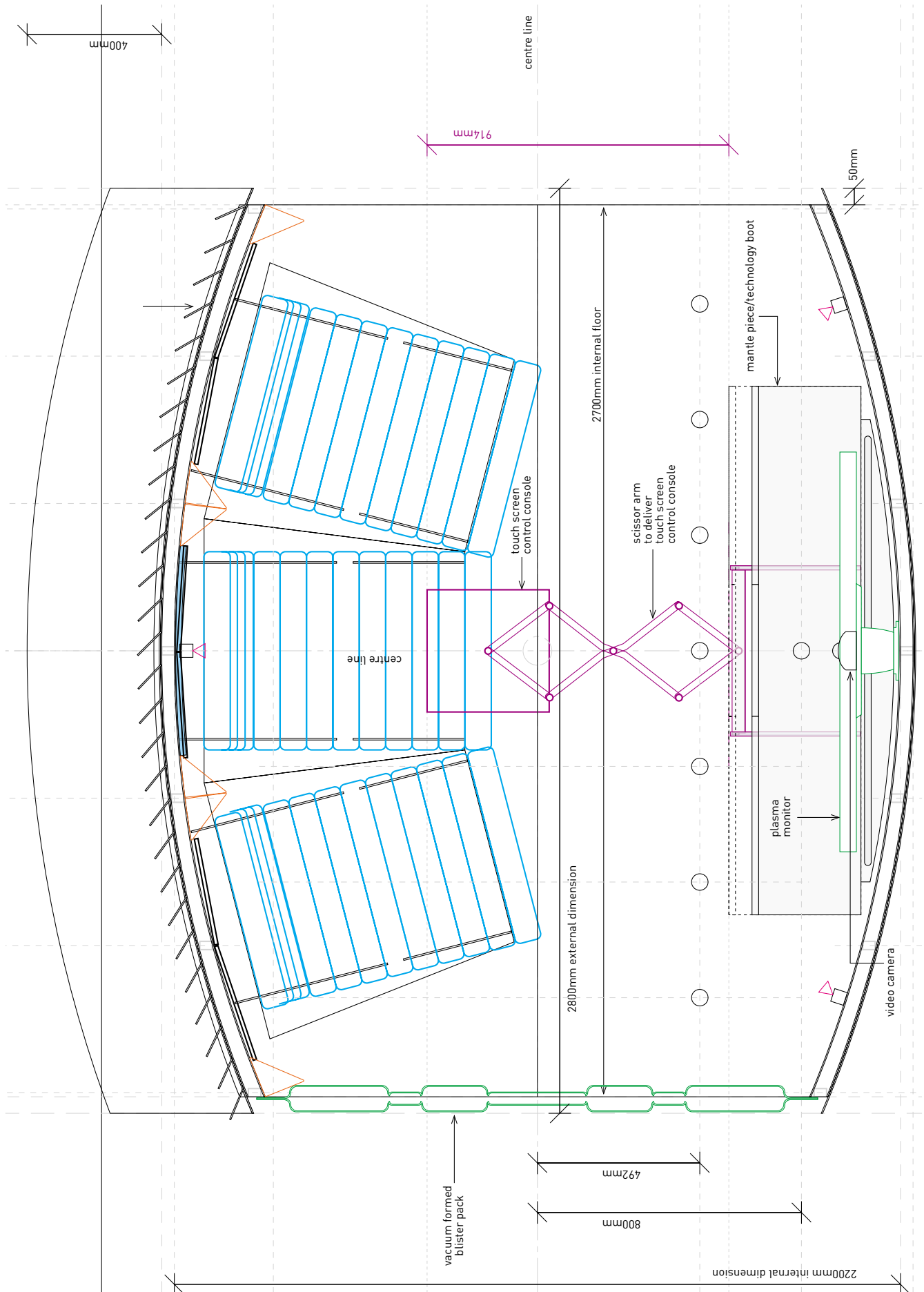
We have contacted Michael Parry from PiVoD who has provided data on the cable reticulation requirements such as the number and size of cables and the appropriate bending radii.



Above: Visualisations of the proposed new Scissor Arm and delivery sled for the touch screen control console in extended position and retracted position. Left: photographs of the construction of the balsa wood study model of the Scissor Arm and delivery sled.

02.] Report on Design Progress: Developing the fibre optic lighting system for the Blisterpack display exhibition wall.

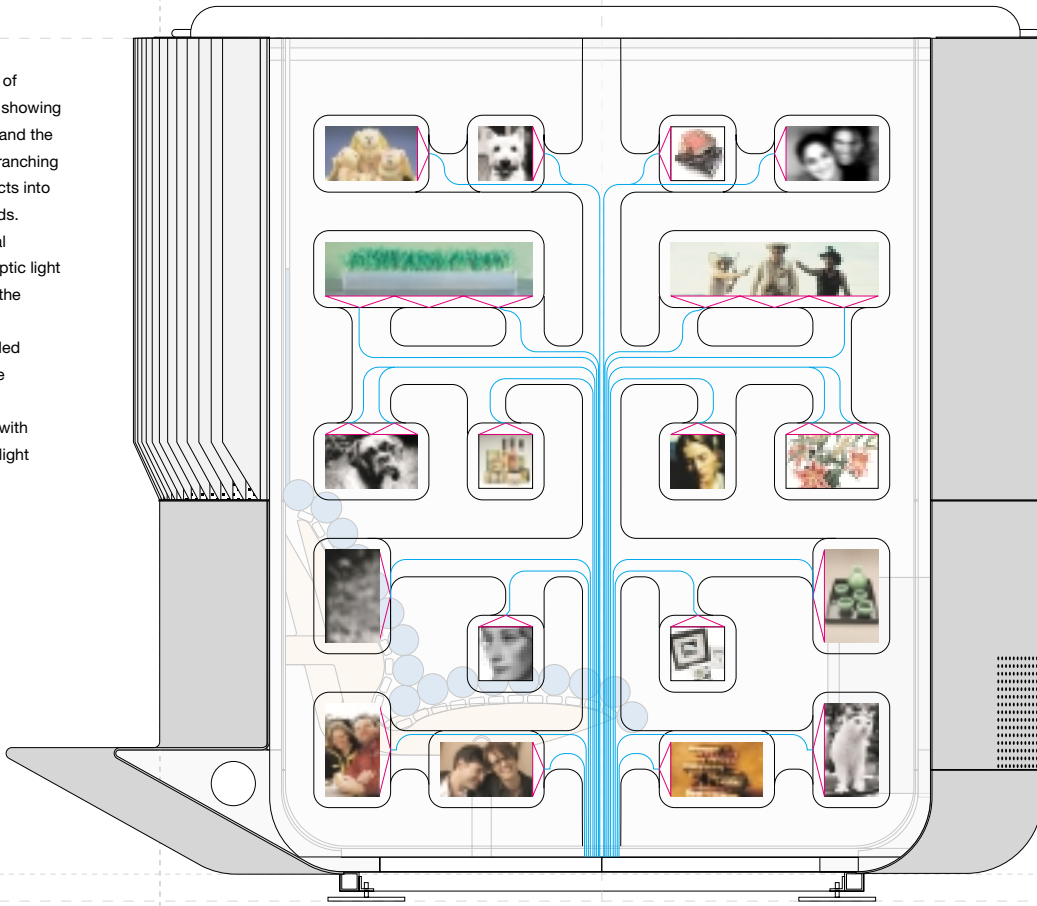
26.11.02 In consultation with Lionel Barden from Fibre Light International we have continued to detail the optical fibre lighting system for the Blisterpack display exhibition wall. This end wall for the Screen Lounge Pods has been designed to perform a number of functions. It is translucent and affords some connection between the inside space and outside space around the Pods, offering passers-by in the Memory Grid space and the Screen Lounge space glimpses of the interiors of the Screen Lounge Pods and a



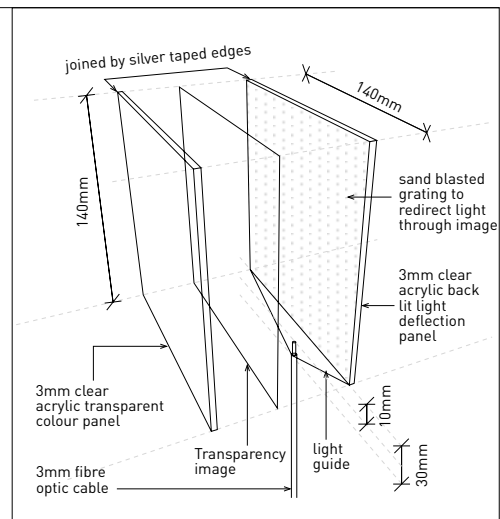
Plan of Screen Lounge pod showing the Scissor Arm and delivery sled at full extension. Plan indicates that this combination has a similar reach to the first design.

Right: End elevation of Screen Lounge Pod showing the Blisterpack wall and the optical fibre cable branching from the delivery ducts into the image blister pods. Drawing shows initial orientation of fibre optic light guides to illuminate the transparencies.

Below: Detail exploded diagram showing the components of a transparency frame with attached fibre optic light guide.



distorted view of the activity within. This end wall, previously also described as the memory wall, is conceived as a display wall of images designed to evoke an impression of domestic space, to maintain a notion of the domestic within the Screen Lounge Pods and to propose ways in which people may seek to employ contemporary media in displaying and storing domestic and familial memories and ties. In our initial design for this system we proposed that small LCD screens be also enclosed within the Blisterpack enclosures. To this end we have designed the enclosures to take small LCD monitors and small holograms but the budget does not allow their inclusion at this moment. Further we propose these walls as exhibition spaces, that can be used by media artists and film makers to develop installation works on a small scale that may well relate to programming themes being explored elsewhere at a particular time within ACMI.

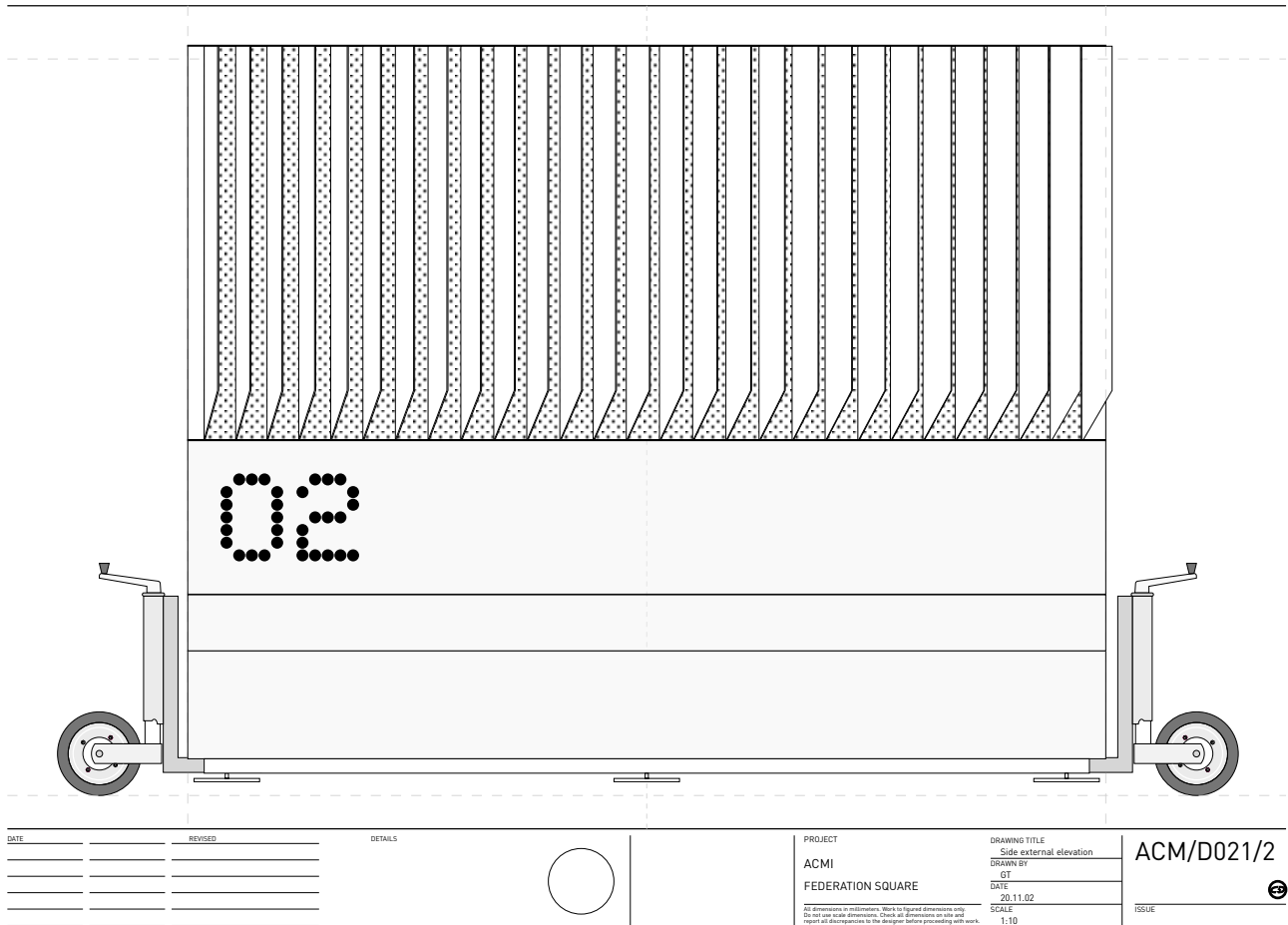


In developing the design details, consideration has been given to modes of back lighting, bending radii for optical fibre cable and the geometries of the acrylic light ducts required to achieve a uniform distribution of light through the sides of the transparent mounting frames. This data has contributed to a minor reorganisation of the blister enclosures and some dimensions. A fibre optic system has been chosen to illuminate the images for reasons of safety with regard to fire, compactness and ease of maintenance. Within the design all the technology for lighting and mounting is visible.

03.] Report on Design Progress: Developing the Dolly Wheel Transport System for the Screen Lounge Pods.

A modular transport system is being developed to allow the assembled Screen Lounge Pods to be moved and repositioned around the ACMI building. It is understood that the Screen Lounge Pods will mainly be deployed in areas with computer flooring and that content, control and power will come via a floor sourced tether. The transport system will require four single wheel units per pod to be quickly

slotted into the chassis and then wound up to elevate the pod off the floor. It is envisaged that the two leading wheels will be fixed and the two trailing wheels will turn. Two to three people will be required to guide and push the pods generally but with experience only one person may be required.



04.] **Report on Construction: Progress on the construction drawings.**

Documentation continues with progress on the construction drawings. Key areas of documentation are: the mild steel frame and all associated connection points, the blister pack and internal lighting details, the fibre glass shell panels and associated pattern and mould details, the scissor arm and mantle piece operation and fabrication.

05.] **Discussion with fabricators and consultants on fabrication techniques: The mild steel frame.**

26. 11 02. Crowd Productions has been in consultation with Riva Fabrication to go over all details of the mild steel frame to discuss all issues of fabrication, materials, thicknesses, sizes and availability, economy and duration and sequence of construction considerations, joining and connection design detailing and techniques. This is to ensure that everything we draw, while being unique in terms of performance, is as simple and cost effective and expedient as possible as well as presenting the highest level of finish possible within the budget. We want to embed as much experience and knowledge about construction techniques within the drawings and detailing to avoid as much ad hoc design and detailing as possible and make fabrication and final assembly quick and precise. This can only be achieved through close collaboration with highly experienced practitioners such as Riva.



06.] **Discussion with fabricators and consultants on fabrication techniques: Fire.**

22. 11 02. Crowd Productions contacted Aupr Fire as requested by CMR and spoke to Jan Ottoson about the fire regulation and

performance issues relating to the Screen Lounge Pods. A five page document detailing all the materials and elements of the Screen Lounge Pods was prepared and emailed to Aurp. On 26.11.02 Jan responded with a series of questions and a directive. As the Screen Lounge Pods do not have proper ceilings, are not enclosed and do not have doors they are not regarded by the fire regulations as rooms in their own right but as furniture. Therefore the key consideration is that they are placed near fire sprinkler heads.

We note the six seater Screen Lounge Pod has been designed with higher walls to give it visual connection to the ceiling. In doing this we have to allow sufficient clearance for the building's speaker system to function properly.

We will endeavour to see that where ever possible within the time and budgetary constraints that the most fire retarding materials are used to maintain the design elements. Jan pointed out that it was an important design feature that the acoustic porosity of the Screen Lounge deign would allow the occupants to hear a fire alarm in the building, should it go off. He directed us to speak to Lee Cleghorn from AHW, contractors responsible for the sprinkler system.

07.] Discussion with fabricators and consultants on fabrication techniques: Fire.

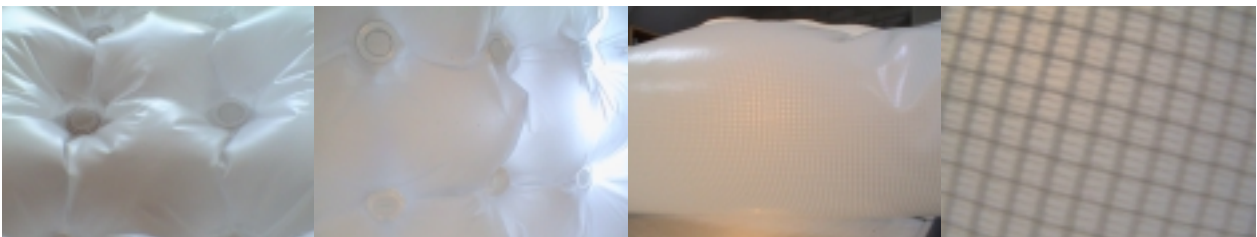
26. 11 02. Crowd Productions contacted Lee Cleghorn from AHW to procure plans for the sprinkler system plan in the Memory Grid and Screen Lounges in the ACMI building at Federation Square. Lee said that in order to get the most exact plan of the as built sprinkler system in the nominated lounge spaces in the ACMI building we would need to contact Entire Fire Protection, the installers and speak to Ralph Molone. Crowd contacted Entire Fire Protection and is awaiting copies of the as-installed sprinkler plans.

08.] Discussion with fabricators and consultants on fabrication techniques: Pattern Making.

22. 11 02. Crowd Productions has prepared and sent out three tender packages for the fabrication of the patterns from which to make the moulds for the fibreglass components of the shells for the Screen Lounge Pods. Preparation of the packages for quoting has been undertaken in consultation with Oliver Jurga, the preferred tenderer for the fabrication of the translucent fibreglass components.

09.] Discussion with fabricators and consultants on fabrication techniques: Inflatable Ceiling.

23. 11 02. On Saturday November 23 Crowd met with Peter Bedggood from Bedggood Canvas to view a number of new inflatable ceiling test prototypes which we photographed and discussed in order to further develop the design. The key aspects of our discussions are the need to make the ceilings as simple as possible, the need to have as few welds or joins as possible, the need to have as clean and flat an edge as possible, the need for the pattern to deform in a predicable way to fit the shape of the Screen Lounge Pod and the need to achieve a high level of strength in the final design. From these discussions two new prototypes are currently being prepared. We also built a simple test pillow of the new Polymar inflatable fabric. The test proved very successful. The fabric welds very well and the welds are very strong. The material can be inflated to a very high pressure, so that it feels something like a football bladder. The inflated test piece was subject to impact tests and appears very resilient. It performs well also in terms of translucency. We will conduct further tests shortly as we finalise the overall design and expect to receive from Indtex shortly details of pricing etc.



Photographs showing the most recent prototypes testing new designs [left] and the new Polymar material [right] for the inflatable ceiling element.

10.] Discussion with fabricators and consultants on fabrication techniques: Fibre optic lighting fittings for the Blisterpack.

27. 11 02. Crowd meet with Brendan O'rouke from Interium, display and lighting products, to review our strategies for the illumination of the photographic transparencies in the Blisterpack wall element. Interium sells a system of edge-lit acrylic light boxes, Prismex, that feature a screen printed diffusion and diffraction grating that may have application in the Blisterpack wall. We are planning on further consultation with Interium shortly.