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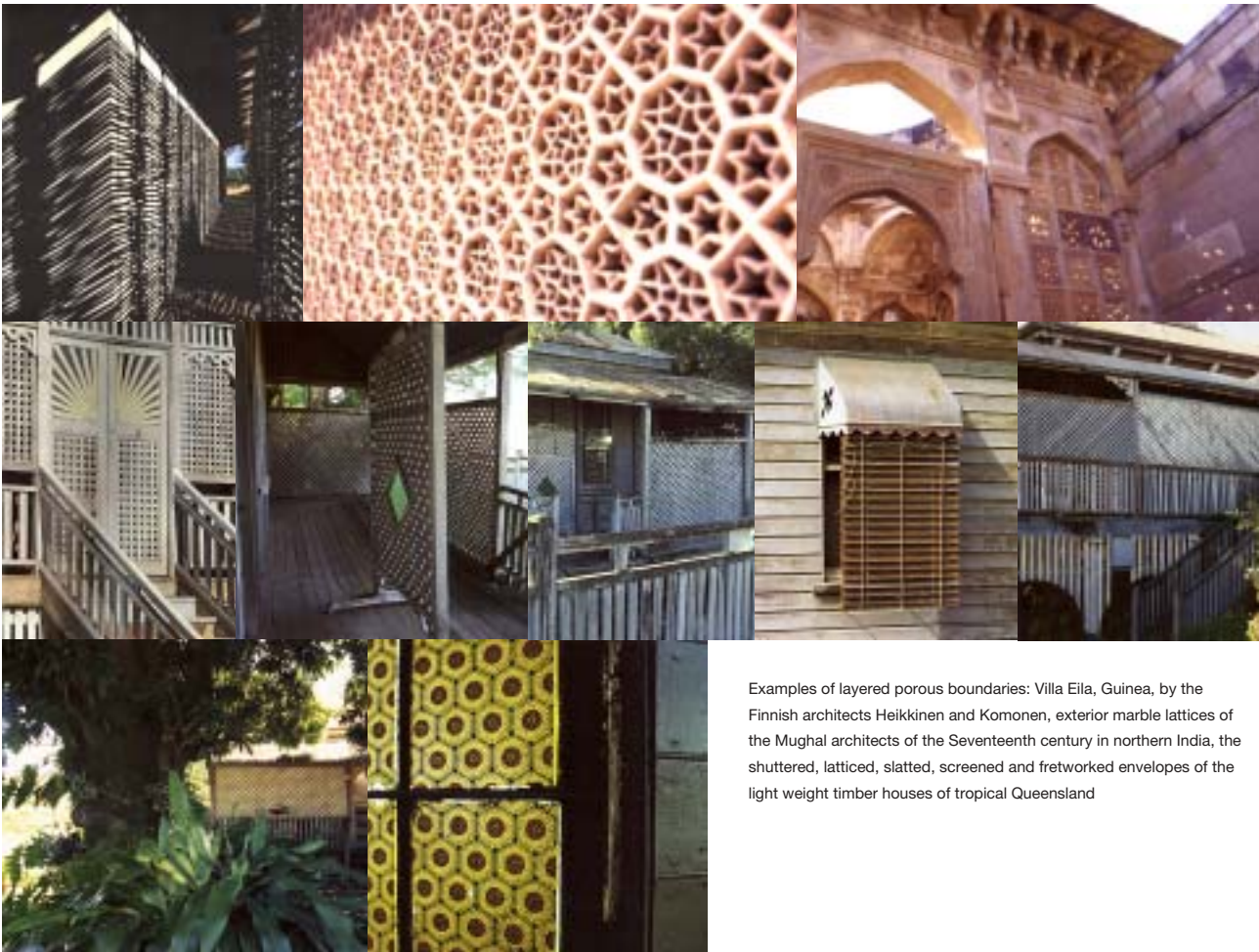
ACMI Screen Lounges: Progress report on design

From **Crowd Productions**: A report of progress and an outline of research, design and construction work to 12.08.2002

01.] Report on Design Progress: Developing the layered porous walls of the screen Lounge pods

We are keen to emphasise the idea of the flow of energy and data through the Screen Lounges to the surrounding building spaces and vice versa, to create curiosity, using surfaces that wrap around the lounge spaces but do not isolate them. Drawing from the vocabulary of video and film production we have worked to design an exterior skin that reflects this character, alluding to scanning, sampling and the jump cut, to create a discontinuous and fragmented porous surface that suggesting the voyeuristic and participatory nature of television. We also see this discontinuous nature as being reminiscent of the experience of the city.

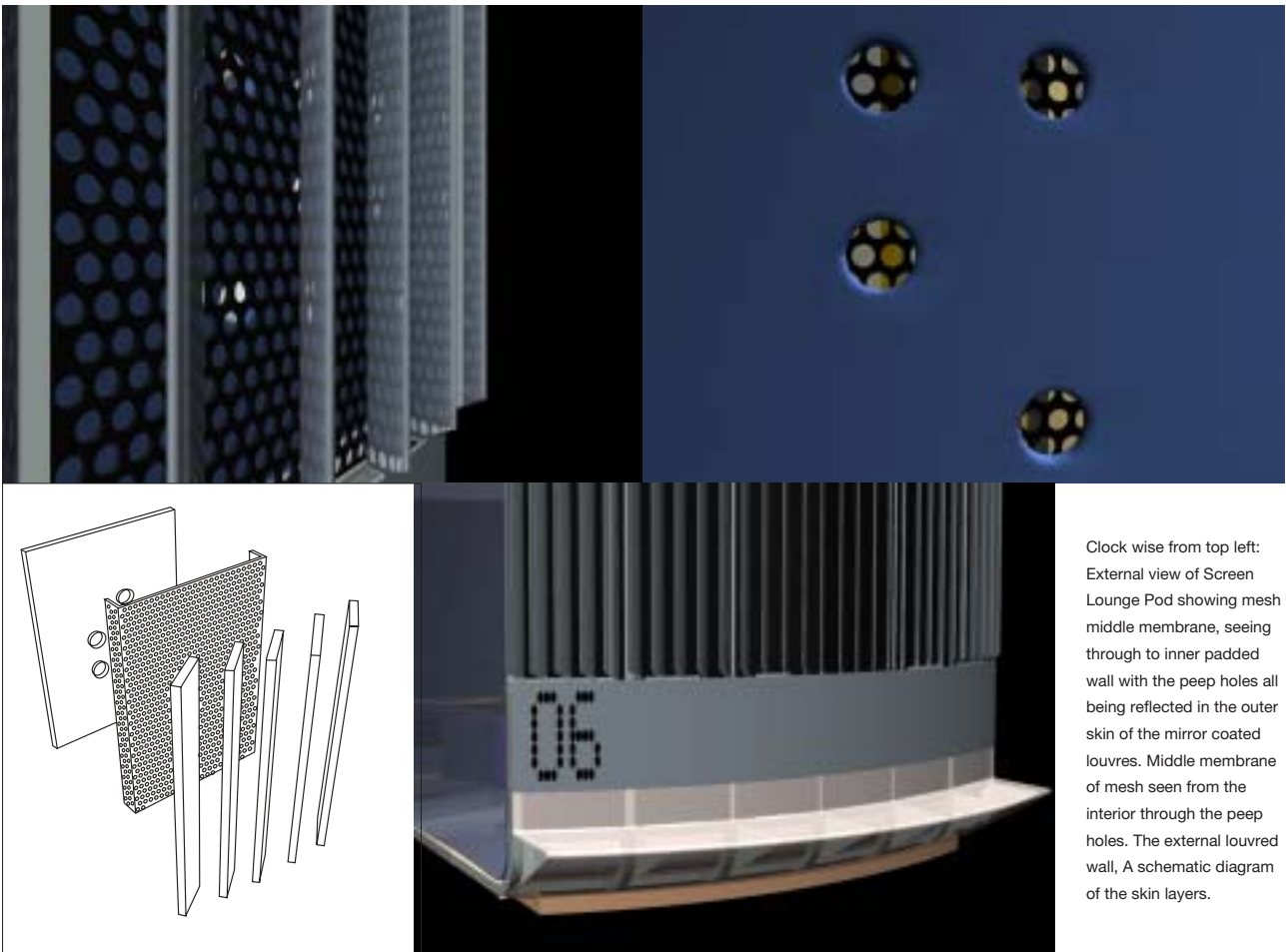
The walls of the Screen Lounge Pods consist of three layers. The outer surface of the Screen Lounge Pod is louvred to break down the



Examples of layered porous boundaries: Villa Eila, Guinea, by the Finnish architects Heikkinen and Komonen, exterior marble lattices of the Mughal architects of the Seventeenth century in northern India, the shuttered, latticed, slatted, screened and fretworked envelopes of the light weight timber houses of tropical Queensland

solidity of the surface. Behind the louvres is a black mesh wall, the middle membrane. The louvres offer the illusion the interior can readily be glimpsed, an invitation to voyeurism. The inner surface of the louvres is mirrored so as to reflect and distort any image that does present itself from the interior. This achieves an amplification of the sense of activity from within while further fragmenting it. The passer by, in motion, glimpses the peep holes discontinuously, in a row interrupted by the screening rhythm of the outer vertical louvres. This apparatus acts like a Zoetrope, the early hand held mechanical forerunner to cinema, creating a strange slightly suspended sequence of fragmentary images. From within the occupant looks out through the padded wall and the black metal mesh beyond and out past the mirrored louvres to the surrounding space. From within, the view of the outside is now distorted and fragmented by the louvres.

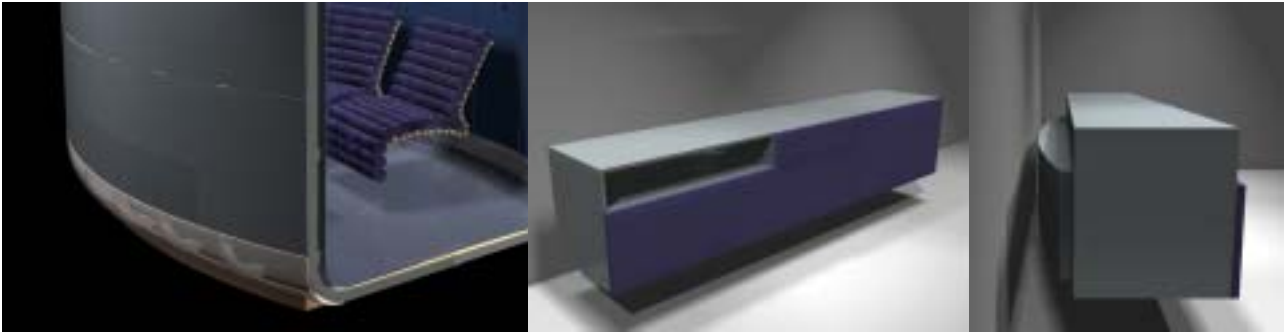
Architecturally the shuttered, latticed, slatted, screened and fretworked envelopes of the light weight timber houses of tropical Queensland have provided us with the model of the indeterminate, layered and porous skin.



Clock wise from top left:
External view of Screen Lounge Pod showing mesh middle membrane, seeing through to inner padded wall with the peep holes all being reflected in the outer skin of the mirror coated louvres. Middle membrane of mesh seen from the interior through the peep holes. The external louvred wall, A schematic diagram of the skin layers.

02.] Report on Design Progress: Development of the Mantle Piece/Technology Boot

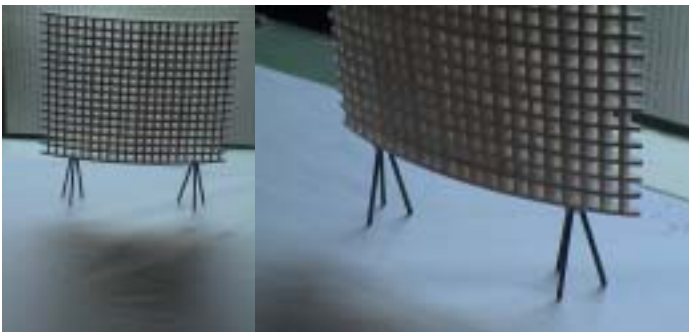
In discussion with John Philp from PIVoD we have been refining the storage requirements for the technology housed in each of the Screen Lounge pods. After much agonising and research John feels PIVoD can work with the 300mm by 300mm cross section of the Mantle Piece, as an internal dimension, with three shelves, each with an internal height of 100mm. Two shelves will run the full length [1.6 metres] and the top shelf will be 600mm long. The internal shelves and the base of the mantle piece will be made of perforated metal to permit maximum flow-through of air for equipment cooling. The Mantle Piece is ducted to the back wall of the Screen Lounge Pod which now has a perforated air vent to exit the hot air from the equipment to the outside. The design of the Mantle Piece has been modified to place the touch screen in the centre, directly under the plasma screen. This has been done to ensure the uniform accessibility of the touch screen to Screen Lounge viewers.



Visualisations showing the external vent holes for the Mantle Piece technology boot, the Mantle Piece seen from the front, closed, and from the side.

03.] Report on Design Progress: Developing a screen to signify the Edworks or Memory Grid functionality

Pursuant to conversations with Kim Montgomery, Ross Gibson and John Smithies we are exploring the design possibilities for a partition screen to indicate the availability of Edworks or Memory Grid functionality within a Screen lounge Pod. Such a partition needs to be highly visible, noticeably different from the other partition screens within the environment and yet still contribute to the principle architectural and design aims of the Screen Lounge project. We have developed an egg crate partition screen that maintains the themes of porosity and the idea of flow [in that this partition changes its porosity dramatically as the viewer passes by, emphasising the significance of the moving perspective]. The intention is to attract interest and arouse curiosity. The egg crate screens can be made out of a bright material that specifically signifies the Edworks or Memory Grid functionality. They can set up in front of the Screen Lounge Pod. They may also incorporate some graphic or textual elements.



Scale model of the proposed egg crate screen to signify the presence of Edworks or Memory Grid functionality. Model at scale 1:10 made in computer controlled router, cut out of balsa wood.

04.] Further development of the test bed Screen lounge test bed prototype at VECCI

To continue the development of the test bed prototype Screen Lounge at VECCI we are sourcing a cheap mock up substitute for the proposed inflatable ceiling. A French floating sun matt has been sourced that comes closest to approximating some of the characteristics of the proposed final design. These are currently on order from Sun Crest in Sydney and should be here in two weeks.



05.] Questionnaire to ACMI stakeholders to illicit responses to the Screen Lounge environment

As previously reported in discussion with Kim Montgomery we prepared a questionnaire about the experience of the Screen Lounge Pod interior. The questionnaire contained nine questions. The questions and answers follow.

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| [Q1] Do you think the Plasma screen in the screen lounge is situated at the correct height in relation to the seating? | Yes. | No, but low. | For it is marginally low. Should be 20cm higher. |
| [Q2] Would you still think this if the Plasma screen were not angled 5 degrees downward? | Yes. | Yes. | Yes. |
| [Q3] Do you think the Plasma screen should be angled downwards? | Yes, but is there a reason for it being angled? | Yes. | Only if it was a bit more elevated. |
| [Q4] Do you think the Plasma screen is too big? | No. | No. | No, its a comfortable size |
| [Q5] Do you think the Plasma screen is situated too close to the viewer? | No. | No. | No, it still has enough space for peripheral vision |
| [Q6] How does the interior of the screen lounge feel with respect to its size internally? Does it feel big enough, just right or too big? | It feels quite spacious for 1-2 people but not too big. | A little bit claustrophobic. | I feel like I'm in a spacious tent. There's plenty of room. |
| [Q7] How comfortable should you feel inside the lounge? | You should feel very comfortable but not enough to fall asleep. | Ok, not too comfy - seating doesn't allow for you to colonise space - it's uncomfortable. | As comfortable as I would feel in my own viewing area at home. Padded seating is good. |
| [Q8] Is there a personal intimacy with the screen? | Yes. | Yeah kind of. | Not overtly so, but there is empathy with the screen for me. |
| [Q9] Do you think that the screen programming content will actually render all other elements of the screen lounge environment inconsequential? | No. | No way, its a different experience | No. The space in which viewing takes place i an integral part of the viewing experience. It is big enough, yet blocks out the extraneous world. |
| Other Comments: | Is there an issue with the distance between the seat and access to and interaction with the touch screen? | | |

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| [Q1] Do you think the Plasma screen in the screen lounge is situated at the correct height in relation to the seating? | It could be raised slightly higher. | Could be slightly higher - 10 to 20cm | Little low for me. |
| [Q2] Would you still think this if the Plasma screen were not angled 5 degrees downward? | It would need to be raised higher if it were to be angled. I would suggest putting people of various heights into the screen lounge to test not only height, but foot room as well. | Yes. | Could be better if it wasn't angled. |
| [Q3] Do you think the Plasma screen should be angled downwards? | Only if it were raised slightly. | No. | Not really. |
| [Q4] Do you think the Plasma screen is too big? | For some works, it may be. Generally, I would not be seated too close to a screen of this size, however the experience of being exposed to such a large screen is opulent at best. | Size does matter when it comes to Plasma - never enough. | No. |
| [Q5] Do you think the Plasma screen is situated too close to the viewer? | see above. | No. | I think it's ok but not sure without moving image screening. |
| [Q6] How does the interior of the screen lounge feel with respect to its size internally? Does it feel big enough, just right or too big? | Put some audio recording gear, synthesizers and laptop in there and I'd move in! Oh, and a small gas cooker with espresso... | Large - 2 seater is very accommodating, maybe too large. | Ok. |
| [Q7] How comfortable should you feel inside the lounge? | Not too comfortable that one would fall asleep. Seriously, if one were to spend an hour in one, you would want to come back and that would rely on not feeling hemmed in. | Not quite like a waterbed but better than a futon. | Pretty comfortable, soft nice seat is nicer. |
| [Q8] Is there a personal intimacy with the screen? | This depends on the content. If I was watching Attack of the Killer Tomatoes, I wouldn't want to be intimate with the screen. If it were an Eno video installation piece, perhaps I would enjoy being awash with image, or rather, consumed by it. | Yes, up close and personal, very cosy. | Not really, possible better in a dark environment. |
| [Q9] Do you think that the screen programming content will actually render all other elements of the screen lounge environment inconsequential? | I don't understand the content of this question. | No, the best films are further enhanced by the best seats otherwise the Gold Class thing would have failed. (Not to say they have the best films!) | No. |
| Other Comments: | | | |

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| [Q1] Do you think the Plasma screen in the screen lounge is situated at the correct height in relation to the seating? | Screen a little low. | Yes. |
| [Q2] Would you still think this if the Plasma screen were not angled 5 degrees downward? | Yep. | Possibly not, but I'm not sure unless I physically sit with it at 5 degrees downward. |
| [Q3] Do you think the Plasma screen should be angled downwards? | No. | Yes, but I'm not that tall! |
| [Q4] Do you think the Plasma screen is too big? | No. | No, but it might depend on how long I was viewing films. The longer I viewed the harder it would be on my eyes. Are there time limitations in the screen lounges eg. 1-2 hours per person/group? If so, the screen is probably an ok size. |
| [Q5] Do you think the Plasma screen is situated too close to the viewer? | A little. | No, but again, like Q4 it may depend on period of time I was viewing. If it was longer than 2 hours I'd prefer that it was further away. |
| [Q6] How does the interior of the screen lounge feel with respect to its size internally? Does it feel big enough, just right or too big? | A bit too big. | It feels just right, but I wouldn't want more than 3 people in there. |
| [Q7] How comfortable should you feel inside the lounge? | Very, as totally possible. | It should feel very comfortable. More like your own lounge room experience rather than a cinema experience (ie. being able to slouch back rather than sit up straight). The problem for me was that I didn't find it comfortable to sit up or slouch back. Sitting up I didn't have the back support and slouching back wasn't comfortable. It might be a difficult design for people with back problems. I wasn't sure if it was my size but I don't think so. This is a bit of an aside, but could a wheel chair get into the space? I'm wondering if the seat/s can be dismantled quickly to allow for it and whether there are steps to get into the screen lounge. |
| [Q8] Is there a personal intimacy with the screen? | No, I think this would be very hard to achieve. | Yes. |
| [Q9] Do you think that the screen programming content will actually render all other elements of the screen lounge environment inconsequential? | No way. | No. I think the viewing environment/ambience/comfort is still really important (unless it's something absolutely riveting whereby people may not mind standing for example). You only need to go to the front row at Cinema Nova or to extreme left or right rows in most cinemas to know that where you sit, or the types of chairs you sit in can impact on your viewing experience, whether this is negatively or positively. People might tolerate discomfort if the content is amazing, but it will still distract from the "wholistic" experience if the environment is not comfortable. This could be the seating; air too stuffy/too cold (the latter happens at Treasury Theatre); noise levels; lighting etc. |
| Other Comments: | | Hope this helps, doesn't give you any extra headaches. |

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| [Q1] Do you think the Plasma screen in the screen lounge is situated at the correct height in relation to the seating? | Could be a bit higher. 1/2 a foot or so. | Slightly low for linear. Too far for interactive. |
| [Q2] Would you still think this if the Plasma screen were not angled 5 degrees downward? | Yes. | Better for linear. |
| [Q3] Do you think the Plasma screen should be angled downwards? | No. | Not unless there is a very sound reason eg. to stop glare and reflection or for kids. |
| [Q4] Do you think the Plasma screen is too big? | No. | Not for linear. Possibly for interactive but the problem is more that you would need to position the interface, keyboard, mouse and/or joystick in an appropriate location of users. |
| [Q5] Do you think the Plasma screen is situated too close to the viewer? | Maybe a little (my mum always said not to sit too close to the tv). | No. |
| [Q6] How does the interior of the screen lounge feel with respect to its size internally? Does it feel big enough, just right or too big? | With an audience of one (too big). With an audience of two (fine). | Too big for two, much too big for one. |
| [Q7] How comfortable should you feel inside the lounge? | Cushioning is bit lumpy, but the seat angle is great. | Enough for effective immersion experience with screen content. |
| [Q8] Is there a personal intimacy with the screen? | Yes. | Yes, but there is also a lot of sound leakage at Vecci and distracting movement in your personal vision. |
| [Q9] Do you think that the screen programming content will actually render all other elements of the screen lounge environment inconsequential? | If you are uncomfortable (spacially and seat wise) content will lose in the end. | No, intimacy and privacy are still an issue. You would be acutely aware that you are in a public space and self-consciously distracted by external audio/visual activity. |
| Other Comments: | | Does not really address all the issues with interactivity not being catered for in the current design but I assume that that argument is being held elsewhere! |

05.] Questionnaire to ACMI stakeholders to illicit responses to the Screen Lounge environment continued.

Below is a brief summary of the responses:

Most respondents feel that the Plasma Screen is placed too low.

Most felt that the Plasma Screen should not be angled downwards.

Most felt that the Plasma Screen monitor was not too big and that the seating is not too close to the screen. Interestingly the concerns and warnings about cathode ray tube screens which do emit radiation are being carried over to screens with a new completely different technology that have no ray guns pointing at the viewer and no radiation involved in the image generation process.

Most felt that the interior space in the Screen Lounge Pod was comfortably sized, however some felt it was too big and some felt it was too small.

Most felt that comfort is very important in the Screen Lounge space while not being so comfortable that the viewer falls asleep. Most indicated that the current proposed design achieves this.

Finally issues relating to privacy, noise and temperature were raised in regard to the enjoyment of the cinematic experience. We are very keen to hear any further feedback.

06.] Report on Design Progress: Development of the delivery arm for the touch screen

In developing a design for a delivery mechanism to take the touch screen from the Mantle Piece to the viewers in the Screen Lounge Pod we have been looking at existing examples in Australia. Thus far the principle example is the movable arm developed for the South Australian Museum in Adelaide. In discussion with the Museum we have discovered that this arm has suffered many technical problems, indicating to us that this is not a trivial problem. The arms and the attached monitors are illustrated below. Any information on other systems that you might be aware of would be appreciated.



07.] Discussions with consultants and fabricators on fabrication techniques and systems for the Screen Lounges

01.] 21.08.02 Discussion with Simon Arkley from Safety Marine inflatable boat manufacturers to discuss technical issues with relation to materials the inflatable ceiling

02.] 21.08.02. Discussion with Campbellfield Polyweld, truck curtain fabricators, about long line welding for the inflatable ceiling material.

03.] 21.08.02 Discussion with Network Marketing about the availability of translucent PVC materials for inflatable structures. They will shortly supply us with a full set of samples of such materials

04.] 23.08.02 Fractal Building Systems are sending samples and catalogues of their specialised louvre and mesh products.

05.] 23.08.02 Riva Fabrication are delivering the first partition screen frame prototype for fitting with acoustic foam and internal supporting frame next week.