Tales of the Riverside

An innovative museum development in Richmond, Virginia, has seen the dream of its director richly realised by production company Pyramid Studios

Portraying the life and times of the Virginian state capital of Richmond, the new Valentine Riverside museum - sited in an old ironworks in the US city - opened to an appreciative public earlier this year. It has been designed to provide a totally immersive experiential environment where visitors are set free to explore and interpret for themselves.

With funding provided by Richmond businesses, individuals and the biggest 'challenge' grant ever awarded by the National Endowment for the Humanities, Valentine set out to create a user-friendly hands-on atmosphere - a centre which would be both engaging and educational for visitors from all backgrounds.

It's housed inside the historic Tredegar Iron Works and provides a living archive that takes advantage (but is not overpowered by) new technology.

The project, the brainchild of museum director Frank Jewell, was interpreted and incepted by locally-based production house Pyramid Studios which married multi-image, mixed media presentations and interactive exhibits to more traditional museum approaches.

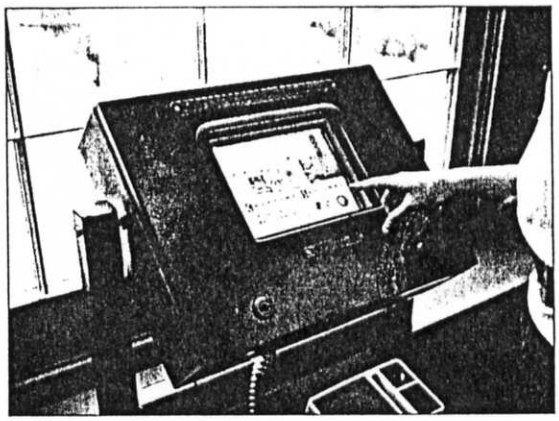
A close client/production house relationship has proved fruitful and has generated a stimulating rather than purely passive experience for visitors.

Jewell, says Pyramid, 'had a vision' when he first joined the museum. Looking out of the windows on the second floor of the Pattern Building which offer a 360deg view of Richmond he 'could see where this city and this nation began'.

This has provided the inspiration for one of the major attractions of the centre. Visitors stepping onto this floor of the main Riverside building find themselves in the middle of the 'Windows on Richmond/Reflections on a Nation' area where the natural views of the region through the windows integrate with a-v displays inside.

There are what Pyramid calls time machines. These are five interactive touchscreen panels, each running a separate programme, and mounted in the windows to provide their own 'windows' on the city's history. They act as guides to help visitors interpret both current and historical perspectives of Richmond's history.

As the views through the windows themselves are central to the overall concept of the area, the delivery media of the 'machines' has been kept as unobtrusive as possible. All non-interactive elements are housed in a remote location so that visitors encounter only the touchscreen video display



The window provides the 'real-time' view of Richmond while the 'time machine' touchscreen functions as a 'window' on local history

(Sharp LCD panels providing a slim, stylish profile).

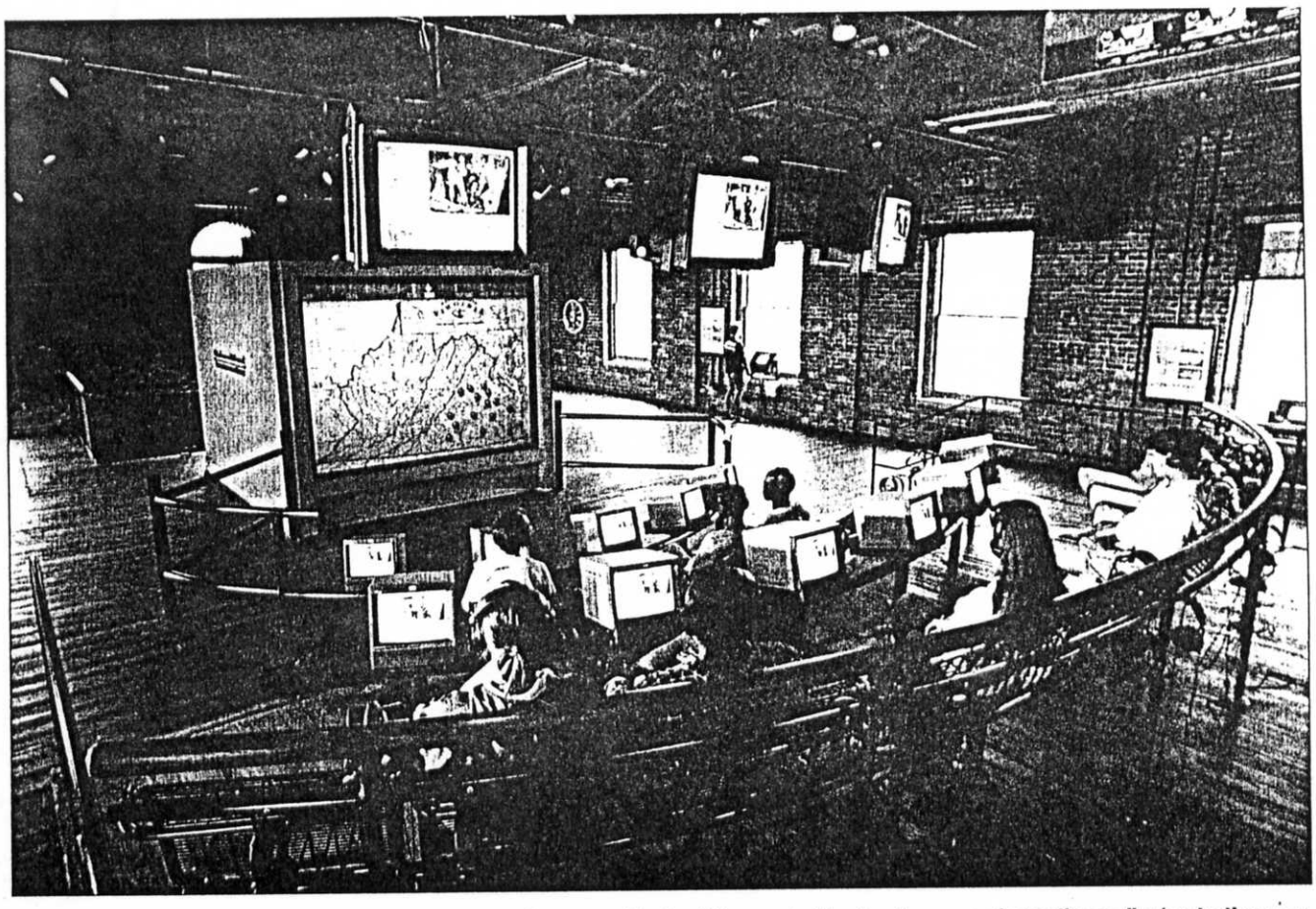
The touchscreen was custom designed for this project. Through this interface, users travel through time to access detailed historical and personal accounts of city landmarks, significant events and the changing face of Richmond through both video and accompanying audio.

The units are housed in modified industrial electronic enclosures with photo-etched designs and titles. And industrial paint finish creates an 'archaic mechano-industrial presentation'.

Essentially a hardware-only system, the low-profile time machines are capable of running an infinite number of software programmes and presentations.

Commanding attention at the core of the 'Windows' area is Riverside's central presentation, a multi-screen media delivery system that has been designed to combine the accessibility and scale of an open-air theatre with the intimacy of a standalone multimedia exhibit.

Providing a chronological 'sampling' of the evolution of the city, the presentation features a 6x8ft high-gain, rear-projection screen which delivers a central image to the audience via a high-resolution CRV disc. This 'map' screen provides the geographical framework of the show as well as



In the central presentation area a 6x8ft 'map' screen supplies geographical and time context for the show appearing on the smaller 'content' screens

a time-line indicating where the show has been and where it's going.

For viewers seated in the theatre, a primary 13in RGB monitor is shared by every two individuals while those standing along the back row are served by three ceiling-mounted 32in RGB monitors. These 'content' screens present the social and cultural development of the city with video images originating from a second CRV disc player running in sync with the first.

The environment is completed with stereo headphones fitted with individual volume controls. This allows the audience to experience more fully a dynamic soundtrack, free from potential interruptions from surrounding exhibits, while the open construction of the theatre permits viewers to come and go as they wish (most choose to stay put for some time).

Screened in a more traditional theatre environment on the ground floor is *Sons Of Vulcan*, a nine-projector multi-image show that provides the visitor's first exposure to what the non-traditional museum has to offer. Conceptually part of the upstairs Windows exhibition it's described by the company as an 'extremely powerful and purely visceral experience, a vision of the industrial revolution in the American South'.

It's the work of British producer Kevin Oldcorn who considers the show 'further proof of the power of the medium because this dramatic story could not have been portrayed in any other way. The Tredegar iron Works in the mid-nineteenth century was a dangerous and frightening place and *Sons Of Vulcan* is quite simply a dangerous and frightening piece of multi-image'.

As this show closes visitors, 'with hearts pounding and adrenaline running high', are ready to explore the rest of the museum.

Arguably the most exciting feature is the museum's nightly sound and light show, an outdoor event giving an overview of 400 years of Richmond history. Key to this presentation are front-projected 60x80ft images projected onto the side of the Riverside's Pattern building and supported by a 15-projector multi-image rig which rear-projects visuals onto the building's windows.

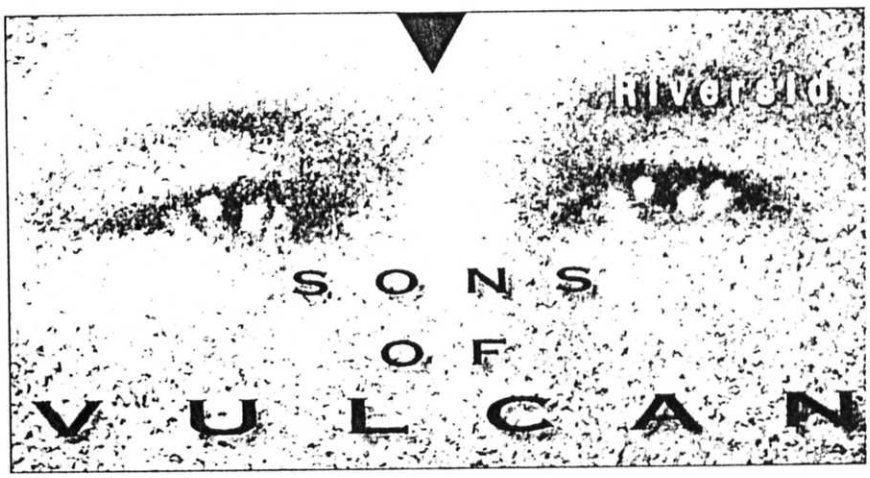
The 25-minute show is screened in a plaza and thematic highlights include the rise of slavery, the city's experience of the civil war and the development of the area as an industrial centre.

An original four-channel soundtrack (composed by Britain's Bardoni and Warr and recorded by members of the English Chamber Orchestra) provides the audio punch. Four subterranean subwoofer systems built into the show's courtyard provide enough power to shake the ground as cannon fire erupts and to allow heavy industry to live up to its adjective.

Front-projected images are delivered by two 6000watt Panis taking 6x6in transparencies with the standard 32-image per projector capacity increased to 85 by using scrollers.

Full synchronisation of all presentation elements has been achieved using SMPTE timecode in a configuration that integrates control of the Panis, scrollers, multi-image system and lighting.

Pyramid took the project from the drawing board to real-



Opening image from Kevin Oldcorn's 'dangerous and frightening piece of multi-image'

Pyramid's kit list

Main items of equipment used by Pyramid for the installation are as follows:

Time machines

Hardware: Macintosh Quadra 650 (230MB HD and 20MB RAM) running Macromedia Director
Visuals: Sharp QA-1650BL colour LCD display; NeoTech interactive integrated touch interface
Audio: Extron MAC2/DA2 distribution amp; Anchor AN-100 powered speakers
Software: Designed or eventual release onto CD-ROM and other distributable media

Central presentation

Visuals: Map screen - 6x8ft Diamond Draper; Content screens - 14 13in Sony PVM-1341 colour monitors, 3 32in Sony PVM-3230 colour monitors; 2 Sony LVR-3500 CRV laserdisc players running in sync
Audio: QSC stereo power amp; 32 Koss stereo headphones with individual volume control
Control system: Dataton

'Sons of Vulcan' 2.25:1 format multi-image
Visuals: 9 Elmo Omnigraphic Pro-AF slide projectors
Audio: Tascam DA-88 digital tape machine, four channels of audio, one channel of control track; JBL amplifiers and speakers; Rane ME-15 equalisers; Anchor AN-100 monitors
Control system: Dataton

Sound and light show

Visuals/projection: 2 6000watt Pani BP6 Gold scenic projectors with 100ft scrollers; Pani AS-100 image scroller; 17 Elmo Omnigraphic Pro-AF slide projectors; ETC Expression show controller; Vari-Lite AR-500
Audio: Tascam DA-88 digital 8-track, four channels of audio, two channels of control track; QSC power amps; Rane equalisers and crossovers; Oxmore DCA-2 remote volume control; 4 Meyers Sound MSL-2A outdoor speakers; 4 Intersonic ST-41S subterranean subwoofers; Anchor AN-100 monitors
Control system: All presentation elements controlled through Dataton using full SMPTE timecode sync

ity in a tight six months but producer (and company president) Bruce Hornstein emphasises that for him the real accomplishment was the effective use of technology and personnel.

The three basic factors, he argues, were strategic use of technology, the nine-man 'total immersion' multi-disciplinary team, and a willingness to explore viable alternatives to accepted off-the-shelf solutions.

Critical to the company's approach was its integrated Macintosh system (it's a member of the Apple Developer's Group) that has become the main weapon in its problem-solving arsenal.

Second generation Adobe Photoshop software for image enhancement and manipulation is key to all Pyramid work and was used to create images and artwork for all the Riverside projects from the four-storey high sound and light show visuals to more traditional print and display material.

PhotoCD also played an important support role. By transferring archival visual material supplied by the museum onto this medium Pyramid was able to store and organise vast volumes of visuals for use by multiple production teams.

It meant immediate access to needed materials with minimal interference between individual projects pulling from the same source.

Valentine Riverside is an exercise where Pyramid has particularly relished the challenge. It believes that a new approach to technology and its applications was required (and provided) - and that it has explored the real potential and limitations of different systems and taken them far beyond their immediate and intended uses.□

Each night a 25-minute sound and light show is screened outdoors with two 6000watt Pani's providing 60x80ft images