

I.R.I.S.: NEW MODELS OF COMMUNICATION

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 4D Visual

Goldman Sachs operates in a global digital economy moving at warp speed, where knowledge capital is key. In this environment, Goldman Sachs' knowledge workers must be open thinkers who quickly formulate meaningful patterns from a high volume of information drawn from multiple sources. Informed decision making in financial markets requires new visualization models that are multi-dimensional yet easy to understand. To manage this information, maintain a keen competitive edge, and continue to lead the market, Goldman Sachs' workforce needs to constantly hone the interpretive skills that are fundamental to all of the company's revenue activities.

To set the tone of the 180 Maiden Lane training center as a thought-provoking and engaging learning environment, we created a new aesthetic experience that models the world in which Goldman Sachs does business. The Intelligent Recognition Inference System (I.R.I.S.) is an advanced computer graphic visualization system that simulates and interprets the processes, patterns, and flow of the environment in which a 21st-century knowledge company operates. Using the languages of learning, culture, and science, I.R.I.S. brings into focus the forces that will shape new forms of business.

It is an icon from the future.

On entering the 180 Maiden Lane learning center, a visitor en route to a training session encounters a series of four horizontally mounted flat-panel HDTV monitors that display a series of programs on advanced visualization. The onscreen imagery forms patterns of movement and growth in a simulated universe, illustrating relationships among market data, narrative and fact, cycles and randomness. With I.R.I.S., the visitor is introduced to insights on how time, culture, behavior, and movement influence patterns and relationships within systems.

AN EXPERIENTIAL WALK-THROUGH
 Content

On-screen, the visitor sees a program in a series of discrete but related segments. Each segment runs from 15 to 180 seconds and cycles throughout the program. The segments are presented in a 3D computer-generated synthetic environment that uses live data feeds to reflect the realities of the real world, where things change constantly and chaotically.

The content speaks to the two fundamental ways we gather information: language and images. Complex ideas live in a metascapes of language, requiring a slower pace and attention that allows people to think, a metascapes that is continuously evolving, not constantly concluding. Each segment is framed with a display of moving text and images that both introduces and completes that segment.

Image Recognition

For image recognition, I.R.I.S. models the thought process involved in interpreting graphics by boiling it down to its rich and dynamic essences. Like the "smart posters" that one sees while waiting for a train, these images create mental maps of disparate data and the

relationships between them in a short timeframe. The images challenge the assumptions of the visitors and inspire them to think in a new way that is appropriate for acquiring new skills at the learning center.

Operating in a Created Environment

All real and virtual organisms, like companies and industries, operate in organic and dynamic environments. Sensing your place and direction in these environments is a gateway to knowledge. With a motion-tracking video camera, I.R.I.S. places the visitor in the program, creates a dialogue between the real and virtual environments, and expands the level of interaction and association with the information. The visitor's movement in the room and relative distance from the installation triggers a process that switches data sets and modifies segments of the program. This creates a never-repeating environment in which viewers participate and with which they interact.

PHYSICAL ARCHITECTURE

The transformation to a digital economy involves merging disparate sciences, from economics to genetics and information technology. New models of communications, integrated financial services, and physical and virtual architectures will evolve. With these sweeping changes in mind, the physical architecture of I.R.I.S. is designed with an advanced mounting system and next-generation, flat-panel, high-definition digital television (HDTV) displays.

The installation is composed of four custom-built stainless-steel poles. Mounted on each wing-shaped pole is a curved and frosted glass panel and a 42-inch HDTV monitor. Ten feet in front of these monitors and embedded in the ceiling is a three-CCD (Charged Coupled Device) color digital video camera connected to a high-speed image processor. This camera tracks the motions and traffic patterns in the training center.

Powering the four HDTV monitors is an SGI Onyx Reality 2 server that sends digital video signals to the monitors in real time. A high-speed Internet connection combines these feeds with a database of parameters and pre-rendered programming and then composites them into a digital video signal. These composite images are processed in the SGI Onyx 2 and sent to the HDTV screens.



View of installation.



Detail of "Roots."