EP®-8000 image generator system

Reduce your operating costs, while providing an enhanced high-resolution visual system.

In today's aviation environment, there is a constant demand for improvements in safety, and there is a specific need for more realistic training devices. To ensure that this need is met, and that pilot training is relevant, effective and optimum, the visual environments created for flight simulators must be accurate, up to date, and extremely realistic.

The EP®-8000 raises the bar for realistic and affordable pilot training, bringing superior visual realism to the synthetic training environment. Rockwell Collins' EP-8000 is the latest offering that meets and exceeds FAA/JAA Level D (and equivalent) flight training requirements.

The EP-8000 visual system balances commercial off-the-shelf hardware technologies and innovative software to deliver the highest quality and most cost-effective visual training environments in the world.

The COTS FPGA-based programmable rendering engine of the EP-8000 provides superior graphics processing power and allows the use of the latest COTS projection systems to achieve the highest approval standards specified by worldwide regulations, including the latest ICAO 9625 international standards. Leveraging COTS technology allows Rockwell Collins to provide the lowest life-cycle costs.

KEY BENEFITS

- Builds on proven, available Level D system capability
- Reduces cost of ownership due to lower part count and higher system reliability
- Industry-leading image quality yielding superior pilot cues and "calligraphic-like" light point processing for increased training fidelity
- Striking increase in real-world scene density within a new WholeEarth environment
- Superior upgrade path preserves investment in legacy databases and host interfaces

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Building trust every day

KEY FEATURES

> Real-world lighting, advanced physics-based atmospheric light scattering and particle effects

> Efficient volumetric rendering (patent pending) for more realistic clouds, smoke and dust

> Enhanced lighting effects in fog

> Regional weather allows for up to eight simultaneous, unique regions with smooth and continuous transition from one to another

> Dynamic and automatically-blended insertion of airport models into new higher-resolution WholeEarth environment permitting greater flexibility in designing training scenarios

> Improved generic and auto insertion airfields

> Increased number of active models and animations

> Industry leading anti-aliasing algorithms, yielding superior moving image quality

> Industry's largest dedicated texture memory (four times that of most high-end PC graphics cards)

> Largest catalog of high-resolution airport models available, with regular updates available

SYSTEM RELIABILITY AND MAINTENANCE

EP-8000 provides maximum system availability and minimum system downtime. With modular software and hardware architectures that are coupled with state-of-the-art manufacturing, diagnostics and system testing, EP-8000 continues a long heritage of reliable, maintainable and supportable simulation products.

AIRPORT SCENE CONTENT

The EP-8000 visual system features outstanding airport and environment content:

> High fidelity digital terrain, 3-D features and aviation obstacles on approach

> Increased number of active models and animations per field

> Detailed airport taximat, runways and 3-D structures built to GPS compliance

> High-resolution photo imagery used for airport surrounds

CONTINUOUS TEXTURE AND WORLDWIDE TERRAIN

Rockwell Collins' patented Continuous Texture (CT) provides high-resolution imagery coverage to an EGPWS (Enhanced Ground Proximity Warning System) compatible worldwide 3-D training environment. The next generation WholeEarth environment is derived from higher-resolution geo-specific feature data coupled with photo-derived theme images that provide correlated mountains, lakes, oceans, cities, deserts and coastlines worldwide. In addition to global texture coverage, specific 3-D features and lights are automatically correlated with the underlying imagery providing additional cultural cues at various altitudes and conditions.

LEGACY COMPATIBILITY

EP-8000 is designed to ensure compatibility with legacy datasets and interfaces created by Rockwell Collins. EP-8000 provides commonality with the ESIG® range of products and EP-1000CT for both the scene content and plug-compatible host interfaces. Provision for compatibility with SP-X has also been included in its design. These features underline Rockwell Collins' commitment of ensuring maximum return for customers' previous investments, as well as continuing long-term value, support and product availability.

SUPERIOR GLOBAL SUPPORT NETWORK

Rockwell Collins is your long-term solution for reliable service and support. Backed by a global customer support network with over 60 locations, we deliver reliable solutions anywhere, anytime – every time.

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Rockwell Collins delivers smart communication and aviation electronic solutions to customers worldwide. Backed by a global network of service and support, we stand committed to putting technology and practical innovation to work for you whenever and wherever you need us. In this way, working together, we build trust. Every day.

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