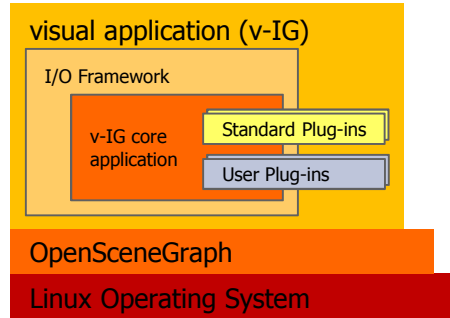


v-IG – our cutting-edge image generator – is based on the OpenSceneGraph library. It provides photo-realistic image quality on COTS PC hardware by efficiently using the computational power and the programmability of the latest graphics hardware.



v-IG's flexible and modular software design is based on a core application which is complemented by various plug-ins. An optional SDK allows for easy extension and adaptation to user-specific needs.

General features (for details see reverse side):

- XML configuration files
- Component based architecture with plug-ins
- Multi-window, multi-channel, support of cluster systems
- Multi-threaded (load distribution by configurable CPU affinity)
- Internal Motion models (fly, drive, ...)
- Network interface
- Environment effects (real-time shadows, fog, rain, sun glare...)
- Particle effects (fire, smoke...)
- Performance statistics as time charts
- Texture compression

v-IG is used in automotive, railroad and flight simulation. It may be used for the visual range as well as for pseudo-infrared simulation. Modules and data importers for headlight simulation provide a flexible means to test new light distributions in virtual environments.




A real-time ray-tracing module provides the ideal tool for the development of sensor models (e.g. laser, radar) which do also take into account individual material properties.

A high-dynamic range module performs the calculations necessary for realistic lighting effects, especially for camera sensor applications.

v-IG is available for Linux systems.



## Overview of Features:

				
Weather	precipitation by particles (snow, rain)	X	X	X
	visibility (fog)	X	X	X
	3d clouds			X
	continuous time-of-day	X	X	X
	ephemeris model	X	X	X
	full-scene real-time shadows	X	X	
	sun glare	X	X	
Objects	animated players with articulated components	X	X	
	animated signals	X	X	
	pedestrian simulation (incl. bikes etc., DI-Guy)	X		
Effects	reflective road / rail surface (reflections depend on cloud state and humidity)	X	X	
	material databases for visual and IR conditions	X	X	
	textured headlights for realistic illumination	X	X	
	additional light sources (e.g. for street lamps)	X		
	reflective signs, street posts, road marks etc.	X		
Specials	picture-in-picture channels (e.g. for mirrors)	X		
	symbol overlays and 3d-symbols	X		
	3d windshield and wipers (also for multi-channel)	X	X	
	procedural vegetation rendering (for grass)	X	X	
	database paging			X
	depth images for range information	X		
	real-time image transfer via network or shared memory (30Hz)	X		
	real-time video recording	X	X	
Advanced	real-time ray tracing, e.g. for sensor simulation	X		
Modes	high-dynamic-range (HDR) rendering with shared-memory-interface incl. tone-mapping	X		
	visualization of OpenCRG road surfaces	X		

