The MAGIC project comprises three principal components: an interactive terrain visualization application (TerraVision), a high-speed distributed image storage system (ISS), and a high-speed internetwork to link the computing resources.

TerraVision allows a user to view and navigate through a landscape based on high-resolution aerial and satellite imagery. Locations of vehicles (for example, from training exercises) can be superimposed on the view of the terrain and updated in real time. The ISS, which stores, organizes, and retrieves the processed images and elevation data required by TerraVision, consists of multiple coordinated data servers distributed around a wide-area network.

The MAGIC internetwork consists of several LANs interconnected by a wide-area ATM over SONET backbone. The network provides trunk speeds of 2.4 Gbps and access speeds of 155 and 622 Mbps.

Interactive, real-time, data-intensive applications like TerraVision and distributed storage systems resembling the ISS will become more common as high-speed networks become the norm. The developers of the MAGIC project are exploring some of the challenges introduced by such systems and developing technology that will foster widespread deployment in the future.

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TerraVision and the ISS Cooperate to Visualize Landscape