



HUGHESTM
NETWORK SYSTEMS



APOLLO GROUP, INC.

ONE TOUCH[®]
Systems

WORLDWIDE INTERACTIVE DISTANCE LEARNING

Hughes Network Systems (HNS) and Apollo Group, Inc have joined to form a new corporation designed expressly to provide comprehensive, turnkey solutions for both large, geographically dispersed organizations and SOHO/consumer users. Until now, distance learning solutions have required the customer to select, integrate and manage three disparate elements in order to realize the benefits of interactive distance learning (IDL); one to provide the student and instructor interface systems, another for the wide area networking solution and a third for assistance with course and content development.

To address this problem, HNS, the world leader in satellite communications systems and services, has teamed with One-Touch Systems, the industry leader in IDL systems and the content and course-development resources of the Apollo Group, the nation's largest provider of adult educational programs, certification and training.

By combining and integrating the resources of the leading suppliers of each of the three critical IDL elements, HNS can now offer comprehensive IDL solutions with superior ease and economics. The product of this new company is a fully integrated distance learning solution that combines the IDL training system, network transport, and educational content. This unique combination of products and services significantly reduces the complexity of deploying an enterprise-wide training application using a single source for equipment, transport services, installation, maintenance, and customer service.

KEY BENEFITS

- Single-vendor solution greatly simplifies design and deployment
- Integrated user interface and WAN technology enables superior functionality and economics.
- Scalable system can be expanded as needed with low incremental costs
- Educational management process helps to maintain student retention rates and protect investment
- Live and on-demand instruction options enable flexible content delivery.

SYSTEM ELEMENTS

Interactive Distance Learning System

The heart of the IDL system is One-Touch's powerful user interface that enables large numbers of geographically distributed students to have highly interactive exchange with a central instructor. This system incorporates broadcast video with interactive voice and data to enable students to watch the instructor on a TV or PC, while using return voice capability to ask questions and a keypad or mouse to provide real-time response to quizzes and tests. All participants hear dialog, which enhances the feeling of live classroom interaction. Test results are tabulated in real-time and can be instantly analyzed by the instructor to assess how well the material has been retained. The system also captures attendance and archives all student responses. This can be particularly useful for courses, which require certification or other confirmation of participation.

Satellite Services

HNS' DirecPCTM satellite networking technology offers a tremendously cost-effective means of supporting interactive connectivity between remote students and the central instructor. The broadcast nature of satellite is a natural medium for the one-to-many environment of a distance-learning classroom. The cost advantages associated with HNS' satellite service result in a quick return on investment. Interactive training sessions are enabled through the use of the DirecPC satellite service, with student voice and data returned by either a VSAT satellite network or by a public terrestrial network.

Educational Content

The IDL system is an ideal vehicle for delivering employee training, professional development, and continuing education. The Apollo Group has become the nation's leading provider of this type of content through its subsidiaries the University of Phoenix, the Institute for Professional Development, the College for Financial Planning, and Western International University. Customer-specific training, industry specific training, and certification programs will be offered initially via the new IDL system, with the potential for degree programs in the future. In addition to existing course content, Apollo brings its industry-renowned educational management to the process, which involves outcome assessments, follow ups, and curriculum development.

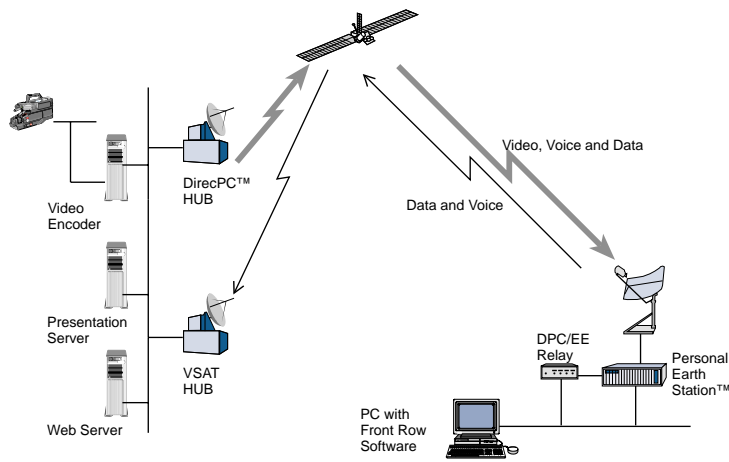


FLEXIBLE SYSTEM CONFIGURATIONS

IDL solutions can be deployed in a wide range of configurations designed and optimized to suit the particular needs of the organization and the nature of the training to be delivered. Three of the more common approaches are illustrated below.

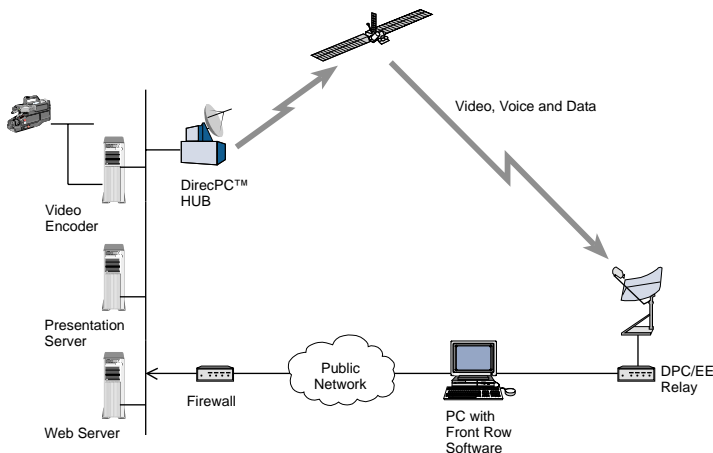
Web-based client with two-way satellite

The student interacts with the instructor using the web-based environment of One-Touch's Front Row™ software. Video, data, and voice are delivered via satellite to the desktop using DirecPC /Enterprise Edition (DPC/EE). Voice and data is returned to the instructor's Presentation Server via satellite using HNS' Personal Earth Station™ (PES). The Presentation Server synchronizes students' browsers to update to the same URL.



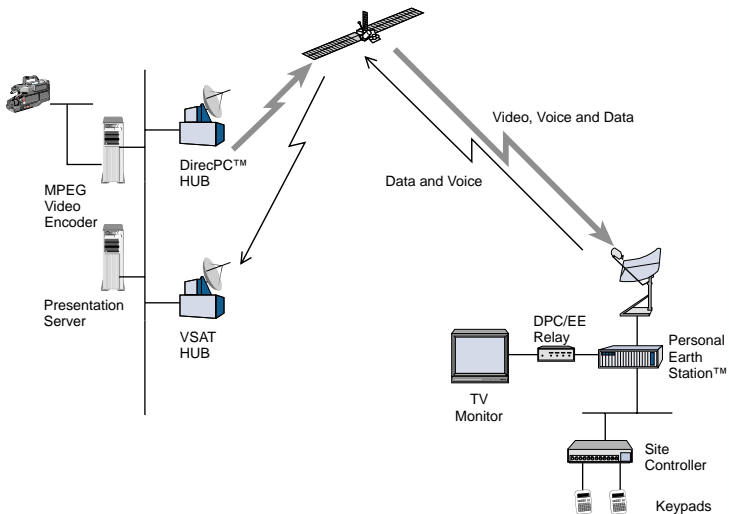
Web-based client with outbound satellite and a terrestrial return path

The instructor video, data, and voice are delivered via satellite to the desktop, and the student's data and voice is returned using terrestrial means, such as the Internet. All system components are based on open standards to ensure compatibility with current enterprise data networks. A small, 21" antenna is available for consumers and SOHO users.



Keypad client with two-way satellite

The student watches the video on a TV monitor in the classroom, and student voice and data is returned via satellite through the use of a response keypad. One-Touch's keypad integrates microphone, digital display, and control and response keys to allow students to ask and answer questions. The Site Controller, located at each remote location, manages all voice and data transmissions between each student and the instructor.



For more information on our interactive distance learning solution, call Hughes Network Systems today.

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