

## **California State University, Sacramento**

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### **Summary:**

California State University Sacramento (CSUS) has a model ITFS system, providing 4 channels of educational programming 24 hours a day, 365 days a year in association with a consortium of local school districts, junior colleges, and universities. ITFS courses also are aired on local and regional cable television systems as a part of the basic cable programming package, providing continuing education to the general population. In addition, CSUS is working with a commercial partner to make wireless broadband available throughout the Sacramento area, and expects to have a fully two-way system available in Spring 2002.

**Serving a Large, Diverse Community.** CSUS is one of the flagship institutions of the California State University system, a group of 23 state universities located throughout California providing educational opportunities to over 375,000 students. CSUS, with a student body of over 27,000, serves the state capital and surrounding areas, which includes impoverished urban neighborhoods, wealthy suburbs and rural farmlands. The university's commitment to distance and distributed education has spirited an expanded schedule of approximately 60 courses in the 2001/02 academic year. A movement from analog to digital technology in the next year will provide an even greater number of program and course offerings.

As a member of the Sacramento Educational Cable Consortium (SECC), CSUS broadcasts a variety of lifelong learning programs to the local school districts, community colleges and the audiences they serve. In addition, ITFS airs educational programming to a potential audience of 350,000 on local and regional cable television systems, all of whom carry the ITFS signal live. This programming is carried on the least expensive tier of the cable television systems, making it a truly "public" resource.

By broadcasting to this wide network of sites, the ITFS system has expanded the reach of high-quality teaching, and has saved many students from lengthy commutes in a traffic-clogged region, expanding the overall attendance of these otherwise inaccessible classes. The ITFS system also reaches many local businesses, such as Hewlett Packard. This increases the educational opportunities for students who are already in the workforce or cannot easily travel long distances to attend on-campus classes.

Each quarter, several thousand students take courses for credit over the ITFS system, while members of the public also “audit” courses from home. The majority of this programming – 15 hours a day – is classroom-based educational programming, while non-classroom educational programming runs after hours.

Through the ITFS system, high school students are able to take a wide variety of courses not available in their schools, ranging from English as a Second Language (ESL) to American History, Civics, English, GED test preparation, and basic skills. Many of Sacramento’s recent immigrants to the United States take advantage of the ESL classes through adult learning programs. The system also broadcasts a wide range of traditional K-12 programming used by elementary and secondary school students. For example, primary school children will participate in the national “Jason Project,” a program aimed at enhancing environmental awareness through live “field trips” to sensitive coastal areas, access to unique panel discussions, and lectures by top scientists. Cable viewers are able to audit classes, watching at their convenience classes that assist learning, help move people into the information age (e.g., Communications courses focused on the internet and its capabilities), and enrich their lives.

**Moving into the Future.** Experts agree that high-speed Internet access and two-way transmission significantly enhances distance learning and increases the productivity and effectiveness of both educators and students. To this end, CSUS plans to develop an Intranet and expand its video-based services through digital technology. Working with its commercial partner, CSUS is moving aggressively to bring two-way wireless broadband to students, faculty, and the local community. Although they have not finalized the details of their arrangement with IP Wireless, they expect to be able to provide at least 1,600 of the 2,200 faculty and staff members with minimal cost wireless broadband service into their homes. This will allow them to telecommute to and from campus, develop online resources for students, and instantaneously access information resources available on campus. In addition, CSUS wants to ensure that its students – most of whom live in the surrounding community– will be able to connect to the University and its resources through broadband service. As a result, CSUS is negotiating an arrangement to allow students to purchase wireless broadband access at a reduced rate. These students will be connected directly into CSUS’ backbone network, which will include high-speed webcast versions of many of the classes broadcast via the ITFS system.

In addition to being extremely robust, the technology used in this network will be portable. The wireless modem is smaller than a pack of playing cards, allowing students, faculty, and other subscribers to attach it to a laptop and use it virtually anywhere in the region. Students, faculty, and staff with laptop computers will be able to connect from home, work, and school without significant variations in the quality of service.

**Bridging the Digital Divide.** CSUS plans to use some of its wireless broadband to also link local school districts and adult learning centers into its “intranet,” thereby giving them greater access to its information resources. Several urban and rural areas in the CSUS region only have limited, if any, access to the Internet. The university plans to develop partnerships with school districts in order to provide them with broadband capability. In areas with no access to DSL, CSUS also plans to give other community organizations, such as libraries and civic-minded businesses, access to wireless broadband in partnership with IP Wireless, demonstrating once again ITFS’ importance as a major resource for community building.

The IP Wireless intends to offer an array of wireless services targeting areas that meet the needs of the residential consumer and small business environment. At this point, they plan to offer service ubiquitously throughout the area – meaning that those neighborhoods that have been bypassed by cable modem and DSL providers (a significant portion of the area) will be able to receive broadband Internet access at home. Although the marketing plan will focus first on those neighborhoods that do not have access, IPWireless will also compete with cable modem and DSL service in the region. This wireless bridge across the digital divide will be the first (and only) choice for broadband Internet service for many residents and business establishments.