



COMPUTECH

**FEDERAL COMMUNICATIONS COMMISSION  
and COMPUTECH**

*The Integrated Spectrum Auction System*

### **WHEN IT COMES TO RAISING MONEY FOR THE U.S.**

**TREASURY**, the numbers speak for themselves. Since 1994, spectrum auctions have constituted the most profitable asset sale ever conducted by the U.S. Government.

The Federal Communication Commission (FCC) now processes more spectrum licenses, with greater efficiency, than ever before. As of June 2008, the value of licenses auctioned by the FCC eclipsed *\$88 billion*. By automating the auction process, the FCC:

- Meets its primary mission of delivering spectrum into the hands of the people who value it most;
- Enables a more diverse audience to bid on spectrum; and
- Continuously generates revenue for the U.S. Treasury.



## THE HISTORY OF THE FCC'S AUCTIONS

**UNTIL 1993**, the FCC relied upon comparative hearings and lotteries to select a single licensee for available electromagnetic spectrum. That year, Congress authorized the FCC to use competitive bidding to generate revenue for the U.S. Treasury by making spectrum available to a wider audience.

Soon thereafter, the FCC engaged Computech to analyze the scope of work and help prepare its solicitation for an off-the-shelf auction system. After choosing a commercially available platform, the Commission realized it instead required a custom-tailored automated system. Appreciating that Computech had a thorough understanding of the specifications—and impressed with the firm's can-do attitude—the Commission chose Computech as its partner. Within six months, the FCC • Computech team launched the innovative Automated Auction System (AAS).

Initially, this client/server-based system enabled the FCC to send auction software to participants who then dialed into a call center for the bidding process. Within a few years, however, the Internet became so prevalent in bidding parties' offices that the FCC asked Computech to re-architect the system as a Web application. Working closely with the FCC, Computech provided ongoing technological enhancements, and the AAS began to evolve into the Integrated Spectrum Auction System (ISAS).

**OVER THE YEARS** the FCC and Computech have partnered to refine the business functionality of the auction system well beyond Web enablement. To meet bidder demand for customized broadband spectrum bundles, rather than single blocks, the FCC • Computech team further enhanced the system to support the nation's first combinatorial spectrum auction (held in 2003). Subsequently, the team developed ISAS, a new generation of software that enables the FCC to hold both individual and bundled spectrum auctions simultaneously.

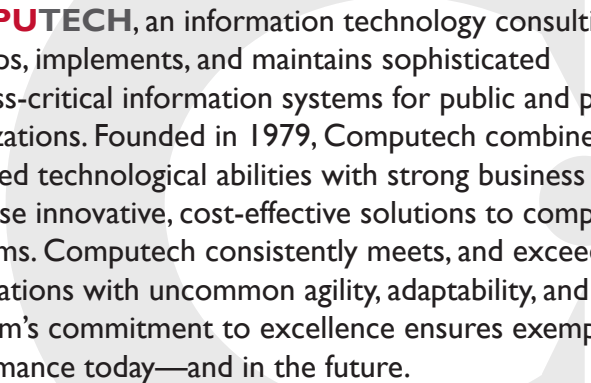
The ISAS's advanced platform automates and integrates all auction functions—from the application process to the assignment of winning bidders—saving time and effort. Previously, a senior-level employee monitored the results of each round and read them to FCC staff via videoconference. Senior-level staff can now perform more business-critical functions, as ISAS uses robust, self-running software that displays each round's real-time results in three secure locations. Consequently, the FCC gains immediate insight into auction participants' behavior—valuable information for refining ISAS.

FCC•Computech's innovative, secure system includes redundant servers and sophisticated software that withstands fluctuations in processing load. The design also ensures a fair auction process for all bidders. Further, ISAS works with the FCC's Revenue Accounting Management Information System, which, in turn, interacts with the U.S. Treasury System, where information on the revenue generated from the auction resides.

# ISAS FEATURES

**THE AUCTION SYSTEM'S** inherent flexibility makes it easily transferable to other agencies or nations. Indeed, other U.S. Government agencies can configure the auction system for their own purposes, offering more revenue-producing opportunities.

<b>“REQUIREMENT”</b>	<b>SYSTEM DESIGN FEATURE</b>
Auction announcement	Auction information made available on the web through XML and RSS feeds
Auction setup	Defining the terms for sale and their characteristics, setting the dates for the various phases of the auction process, and defining the auction methodology
Bidder qualification	Accepting and evaluating applications to determine qualified bidders, interfacing with external databases to retrieve data, creating user accounts and assigning them unique identification numbers
Auction control	Control the schedule of the auction, the submission of bids, and the parameters for calculations
Bidder announcements	Communicate with bidders via the bidding system
Bid processing	Perform the calculations to determine winning bidders
Auction close	Control the conditions under which the auction closes
Results publication	Compute and release results to internal users (auction managers), bidders and the public via the auction bidding system, the internet (XML and RSS feeds), and in paper reports
Post auction accounting	Transmit data to external financial and licensing systems



**COMPUTECH**, an information technology consulting firm, develops, implements, and maintains sophisticated business-critical information systems for public and private organizations. Founded in 1979, Computech combines advanced technological abilities with strong business expertise to devise innovative, cost-effective solutions to complex problems. Computech consistently meets, and exceeds, clients' expectations with uncommon agility, adaptability, and allegiance. The firm's commitment to excellence ensures exemplary system performance today—and in the future.



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