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6.25 kHz Trunking Makes Migration Easy!

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Trunking has long been the bedrock of land mobile radio. The de facto trunking standard, LTR, has allowed efficient channel management by sharing a small number of channels with a large number of users since the late 1970s.

The Icom Digital Advanced System (IDAS) catapults land mobile radio into the digital age, combining the channel allocation efficiency of trunking with the spectrum efficiency of 6.25 kHz channel spacing. IDAS Trunking is now an integral function in the F3161D/F4161D, F5061D/F6061D & FR5000/FR6000 series land mobile radios.

"Current analog radios require 25 kHz, most commonly, or 12.5kHz channels to deliver voice over RF," said Mark Behrends, Icom Land Mobile National Sales Manager. "With IDAS, the voice is digitized and compressed using



trunking capabilities, trunking controller programming over the Internet, limited remote repeater management over the Internet and auto home channel back-up. Icom hopes to release more features soon. These features may include operation monitoring, dispatch control and FR5000 programming all performed over the Internet.

IDAS' versatility makes it a viable solution for many users and operators. It can be used in smaller sites that have only a few radios and several channels in conventional mode or larger sites that currently use analog trunking.

"IDAS is ideal for single site campuses, such as colleges, hospitals, factories, resorts and casinos," Behrends said. "The trunking feature allows dealers to pursue larger facilities that may have hundreds of radios with numerous talk groups, perhaps one talk group per department. The IDAS niche is quite large."

While new customer sites that have no radio systems will be target market segments, IDAS is designed with backward compatibility with dual-mode analog/digital radios and scanning to appeal those customers with existing analog trunked or conventional radio systems.

"IDAS radios can operate in both analog and digital mode, sometimes called mixed mode or dual mode operation," Behrends said. "You can have

a graceful transition from analog to digital by replacing subscriber radios over time rather than all at once in a forklift upgrade." Existing IDAS FR5000/FR6000 conventional repeaters can be upgraded to trunking with the UC-FR5000 Trunking/Network Controller board.

This capability makes it so a university, for example, can install the FR5000 today, put its security department on digital tomorrow, and move the maintenance department over later.

Similar to LTR®, IDAS Trunking is a single site transmission-based. The resemblance ends there, however. IDAS trunking features 30 channels per site, a third more than LTR®; 2,000 units or groups per home channel, a giant increase over LTR® with only 250, which adds up to a maximum of 60,000 ID's per system, compared to 5,000 addresses in an LTR® system.

IDAS allows the user to program the trunking controller using Internet Protocol connection. With an IP connection, an operator can reach the controller from anywhere there is an Internet connection available.

"Using the IDAS FR5000/6000 at site with IP connectivity will now allow you to configure IDAS trunking remotely with more features like ROIP, radio reprogramming, and possible firmware upgrading on the way," Behrends said.

IDAS, launched by Icom last February as a bridge between analog systems and digital narrowband systems, uses the non-proprietary NXDN™ common air interface. The NXDN™ standard was jointly developed by Icom and Kenwood Corp.

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IDAS
ICOM DIGITAL ADVANCED SYSTEM
Now with
Trunking

AMBE+2™ vocoder so a single voice can be delivered in 6.25kHz channels, which allows more channels across a given frequency range." 6.25 kHz gives you more flexibility and capacity in licensing as you are freed from several of the constraints inherent with 25 kHz and 12.5 kHz licensing schemes.

Icom released Phase 1 of IDAS Trunking, which is a platform for future IDAS features. Phase one includes IDAS