

## **Success of open KAR wireless standard establishes flexible platform for wider progress in intelligent public transport**

### PRESS RELEASE

- *short range radio supports vehicle tracking, traffic light priority, data exchange...*
- *field-proven in The Netherlands, the open platform could benefit other countries*

The KAR wireless standard developed for the Dutch Ministry of Transport is playing an important role in improving the architecture of control systems used in public transport. It could be of great benefit to other countries, reports radio modem specialist SATEL.

Nationwide, KAR is the new standard for requesting priority passages (e.g. at traffic lights), transmission of vehicle information, uploading or downloading data from vehicles to a central computer, and sending information for passengers (e.g. to a bus stop).

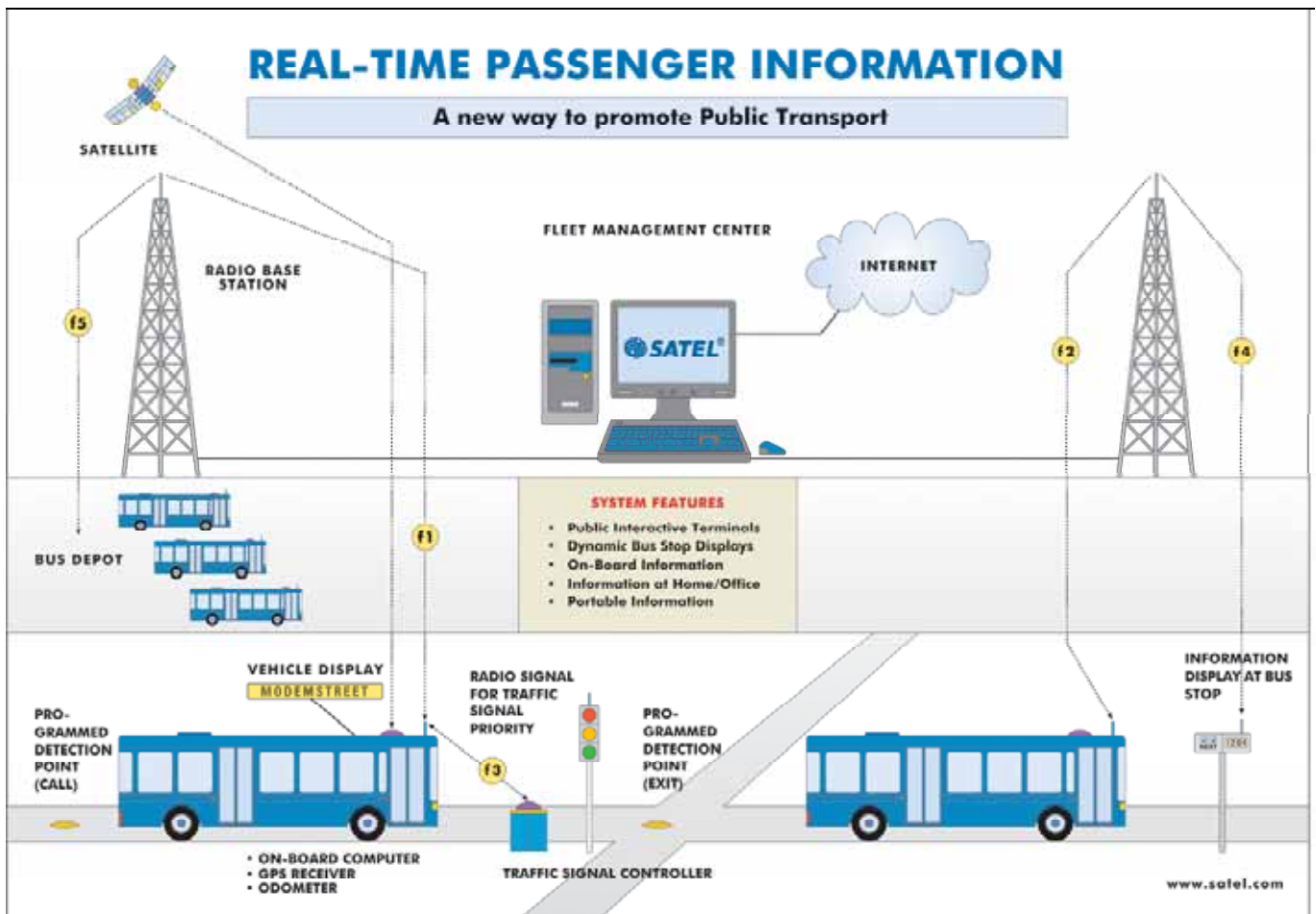
SATEL and its local distributor Nautikaris have been involved in the KAR project since 2001. This market segment has seen rapid growth over that period, with SATEL shipping over 2500 UHF KAR radio modems in the last two years alone.

The Netherlands' decision to create and publish the standard for KAR (Korte Afstands Radio, or short range radio), has led to a highly competitive market that is now supported by wireless radio data modem suppliers, traffic equipment suppliers and system integrators. SATEL believes that this industry standard and its supplier base could now catalyse the accelerated implementation of intelligent transportation infrastructures in other countries.

The KAR system uses the UHF frequency band with a low transmission power. UHF radio modems offers distances from tens of metres up to 3 to 4 kilometres in urban areas. Each node in the network, or basestation, is implemented using one of the familiar, industrial-style radio modems. The technology is a variant of the SATELLINE-3AS radio modem that is employed for communications and alarm transmission in high volume industrial application areas such as water, electricity and gas distribution. As well as offering a low initial outlay for wireless communications, the approach means that there are no fees for airtime. This makes the technology extremely cost-attractive compared to other technologies such as proprietary transponder systems or GPRS networks (using SIM cards and monthly subscriptions).

"Wireless communications offers the most flexible platform for linking the diverse elements of an intelligent public transport system, and the KAR standard, which uses designated UHF frequencies, offers benefits which merit the attention of the worldwide traffic equipment industry," says SATEL's Marketing Director, Aulis Törmä. "We believe it could both accelerate the implementation of intelligent transport systems, and reduce costs."

The KAR standard uses three frequencies in the 427–430 MHz UHF band, one for vehicle tracking (in conjunction with a GPS device), one for traffic light control, and one for file transfer. By sending an industry-standard AT modem command, a computer can dynamically configure one of SATEL's SATELLINE-3AS OA radio modems to handle any of the KAR modes, providing a versatile solution for equipment builders. In public transportation applications in The Netherlands, this system is widely used for tracking bus and tram positions, to assist the operator and to feed the real-time information displays situated at passenger stops, for gaining vehicle priority at traffic lights to keep networks running smoothly and on time, and for general communications.



The open KAR standard has reduced the costs involved in traffic light priority and the tracking of public transport vehicles in The Netherlands. It could now be of significant help to other countries as well.