



Mobile Information Services and Interactive Voice Recognition

SUMMARY

CENTRICO partner SAPN's interactive voice response telephone service offers users a highly flexible method of obtaining traffic information from either a mobile or landline telephone. The system's use of voice recognition technology provides rapid access to information about a variety of traffic conditions across the SAPN network.

USER NEEDS

Using traditional approaches, the ability to obtain information regarding traffic conditions is limited by the location of the user. Internet «Webtraffic» provides real-time information and forecasts, but requires Internet access. 107.7 FM radio and VMS deliver traffic information, but only once drivers have started their journey. Of particular relevance to users of SAPN network, neither of these services can be reached from a quiet Normandy beach or a remote forest hiking path! In response to this issue, SAPN identified the need for a more flexible method of obtaining traffic information that would meet the following user and operational requirements:

- Timely and reliable information
- Personalised and user-friendly
- Available on demand
- Accessible from any location
- Compatible with driving safely

SIMPLE AS A PHONE CALL

The solution identified by SAPN is an interactive Telephone service that uses Voice Recognition (IVR) technology to service requests in an automatic way.

The service provides information relative to A14, A13 and A29 SAPN motorways, including:

- Events
- Travel times
- Traffic conditions
- Long term forecasts
- Toll information

The user can access this information by following instructions and saying words such as "Current Traffic" or "A29". The system, which provides info 24 hours a day, is available to mobile and fixed line telephone users via a premium rate 892 telephone number.

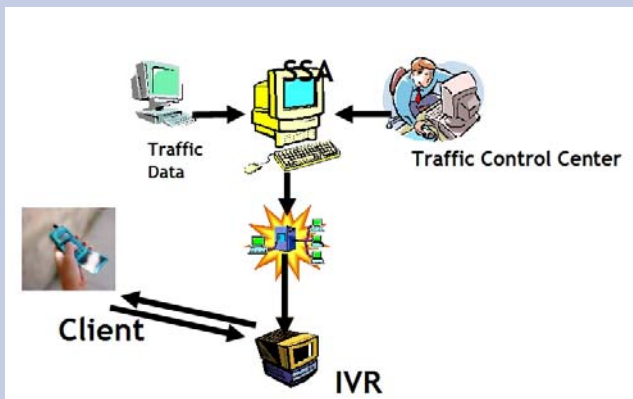


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SYSTEM ARCHITECTURE

The IVR platform is connected to traffic Information database in the SAPN TIC, in which events, travel times and forecasts are stored and formatted as XML files. These files are transferred to the IVR system every 3 minutes. Using voice recognition technology, the IVR detects keywords spoken by the caller and responds by assembling pre-recorded words and phrases to deliver a message to the caller.



FLEXIBILITY FOR THE USER

The system allows users to obtain information either by following the menu structure or by using phrases of keywords to access the desired information more directly. In order to train users in the keyword approach, the system provides customised guidelines regarding the use of keywords and, where the user follows the menu approach, informs users of the keywords that could have been used to access the information more directly. The Voice Recognition Module is equipped with noise filtering/cancelling in order to improve the accuracy of voice recognition. The system assembles groups of human recorded words / phrases to provide information to callers, rather than text-to-voice generated messages, thus providing a more user friendly service.

COMPLIANCE WITH SAFETY REQUIREMENTS

The system differentiates calls from mobile phones from those from fixed landline phones. Mobile phone

users are greeted with a warning message advising them of safety issues involved in using a mobile phone while driving. At any time, the caller can pause and resume their call. Moreover, the simplicity of the directory structure requires little attention from callers, as the call is similar to a normal conversation.

A FUTURE PROOF SYSTEM, AT REASONABLE COSTS AND TIME TO MARKET

The SAPN telephone service was implemented within 6 months, requiring only 4 months of system development and 2 months for the system configuration and testing. Revenues associated with the 0892 premium rate telephone number that is used to access the system are shared between the telecommunications operator, SAPN and the company that hosts the IVR system. These revenues help to offset the development costs and the operational funding requirements. The service currently costs €0.34 per minute to access.



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For further information on other CENTRICO activities visit:

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