



3iV CRYSTAL VOICE SOLUTION FOR SAP

KEY BENEFITS:

- All business logic in SAP environment
- Faster and more efficient data input
- SAP load balancing supported
- Tracking of users through standard SAP reporting and RF monitor
- Reliable solution, components certified by SAP

SAP Certified Integration

DIRECT INTEGRATION OF MOBILE VOICE APPLICATIONS WITH SAP LES MODULES

With the 3iV Crystal Solution for SAP Zetes offers a direct integration possibility between its mobile voice applications and SAP LES (WM/EWM) modules. Without adding extra servers or middleware, it guarantees a fast, real-time information exchange between the SAP system and workers equipped with a voice recognition terminal. The enhancement of the proven 3iV Connector with an Adaptor for SAP and a set of customisable ABAP function modules brings the significant benefits of voice technology to the SAP community.

Direct integration with SAP: safe, light, secure

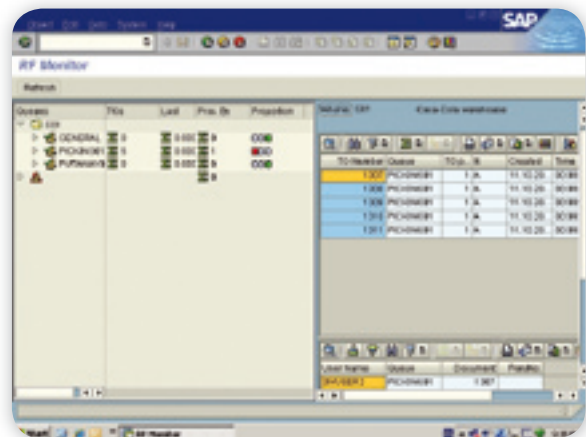
Through the enhanced Java-based 3iV Connector, the SAP system communicates directly with users that are equipped with voice recognition terminals running Zetes' mobile voice applications. This direct approach brings about important advantages:

- Lighter, more economical architecture (consolidation of ICT systems)
- All business logic in SAP environment
- No data-storage outside SAP
- Respecting business rules set up in SAP environment
- Tracking of voice users through standard SAP reporting and screens

A synergy of proven concepts

The Zetes 3i Voice Solution, installed in more than 500 projects in over 20 countries, has proven to deliver increased accuracy and productivity in logistics processes. Zetes' next generation voice solution, 3iV Crystal, has been enhanced to offer a growing number of SAP users in logistic environments even more advantages through voice technology. The integration of 3iV Crystal and SAP offers:

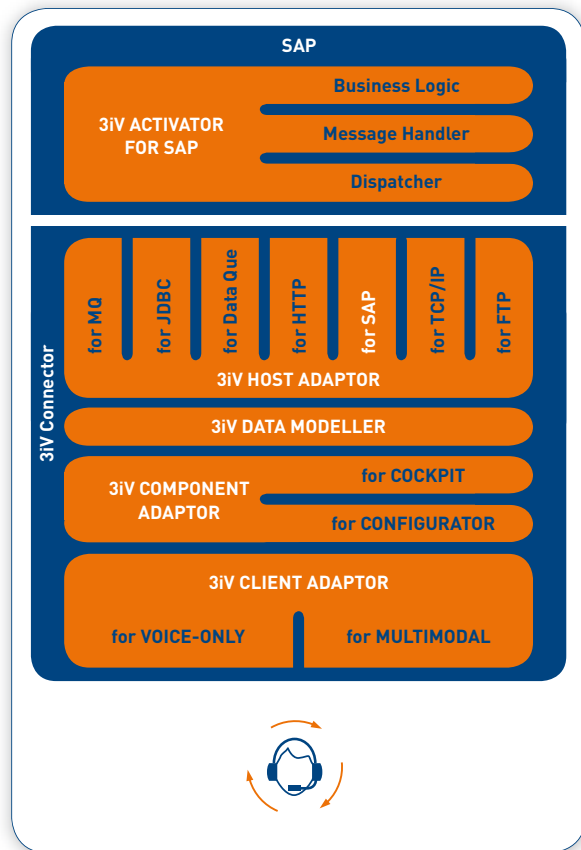
- constant visibility thanks to real-time information exchange
- improved operator ergonomics thanks to hands and eyes free operations
- increased productivity, improved accuracy
- more mobile applications (picking, cross-docking, receiving, inventory, put-away, replenishment,...) on voice dedicated and multimodal terminals
- always the best user-interface: supporting full-time voice driven, part-time voice driven and voice assisted applications
- seamless cooperation with RFID readers, scanners, keyboard & printers



A turnkey solution with standardised components

All elements of the 3iV Crystal Solution for SAP can run on the same server:

- 3iV Activator for SAP:** Leveraging on its wide experience in developing solid voice solutions, Zetes has designed a customisable set of ABAP function modules, to support the 3iV Mobile Applications workflow. It has a three layered approach, entirely written in SAP native ABAP code:
 - Business Logic:** Manages sessions and workflow management
 - Message Handler:** Maps the 3iV messages to SAP tables to allow access by the Business Logic layer
 - Dispatcher:** Handles the communication between the 3iV Connector and SAP
- 3iV Connector:** Is the standard interface of the 3iV Solution, developed in Java. It enables the communication between mobile voice applications and the SAP system via the 3iV Host Adaptor for SAP.
 - 3iV Host Adaptor for SAP:** Translates the standard 3iV messages into RFC's to communicate with the SAP host system. It makes use of the standard SAP interface library, making communication faster and fail-safe.
 - 3iV Client Adaptors:** The 3iV Client Adaptors transport the messages from the 3iV Host Adaptors to the mobile devices and back, ensuring a direct communication with both voice dedicated and multimodal devices. This way, 3iV Crystal for SAP ensures a direct integration with a wide range of logistics processes: picking, cross-docking, pick-by-line, put away, replenishment, cycle counting, etc.
 - 3iV Component Adaptors:** They enable a connection to the additional 3iV Crystal components:
 - 3iV Cockpit:** a web-based, dynamic, graphical reporting tool that provides real-time and historic information on operators and jobs executed
 - 3iV Configurator:** an administration tool that adapts the 3iV Mobile Applications to suit the precise requirements of each individual user and each specific environment. The 3iV Configurator can ensure the storage and the mapping of the SAP credentials linked to the operator IDs.



Terminology

- LES: Logistics Execution System
- WM: Warehouse Management
- EWM: Extended Warehouse Management
- ABAP: Advanced Business Application Programming, SAP's native programming language
- RFC: Remote Function Calls
- CSV: Comma Separated Values (representation of data in 3iV)

