

[PRODUCT SHEET]

Product: QVOICE FLEET MANAGER

A centralized control unit
for a fleet of remotely placed
'QVoice Smart' measurement devices

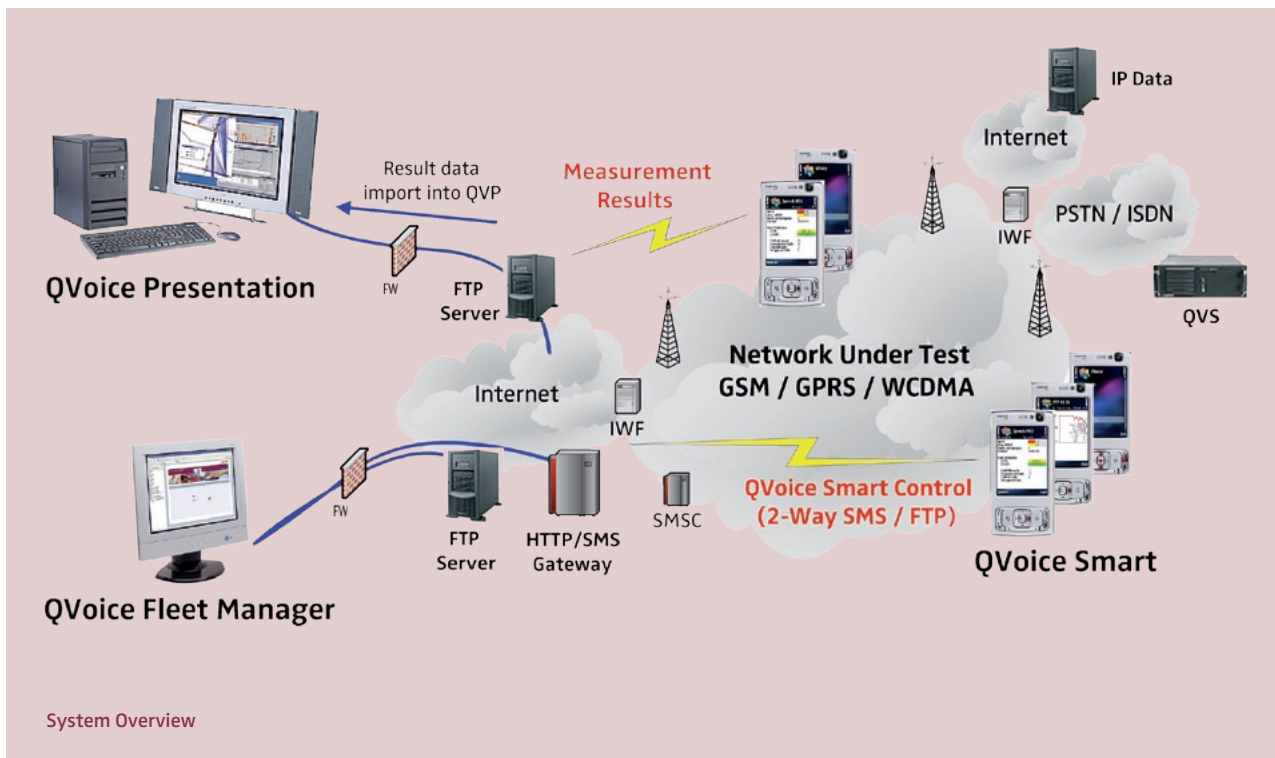


QVOICE FLEET MANAGER

Thanks to the remote control and unattended mode of operation, the Fleet Manager/Smart enables collection of large amount of data over wide geographical areas. It is equally at home in dedicated measurement drives or vehicles using more random routes.

QVoice Fleet Manager is the central component of a remote mobile network data collection system. The unit efficiently controls a fleet of QVoice Smart measurement units that can be strategically placed in locations where continuous or periodic network performance data is of interest. The small 'Smart' measurement devices can be easily installed in vehicles discreetly positioned in fixed locations and even carried by people using the measurement devices habitually as a personal mobile phone.

Measurements can be imported to QVoice Presentation (QVP) via an FTP-Server for storage, analysis and reporting.



Automatic QoS Monitoring Architecture

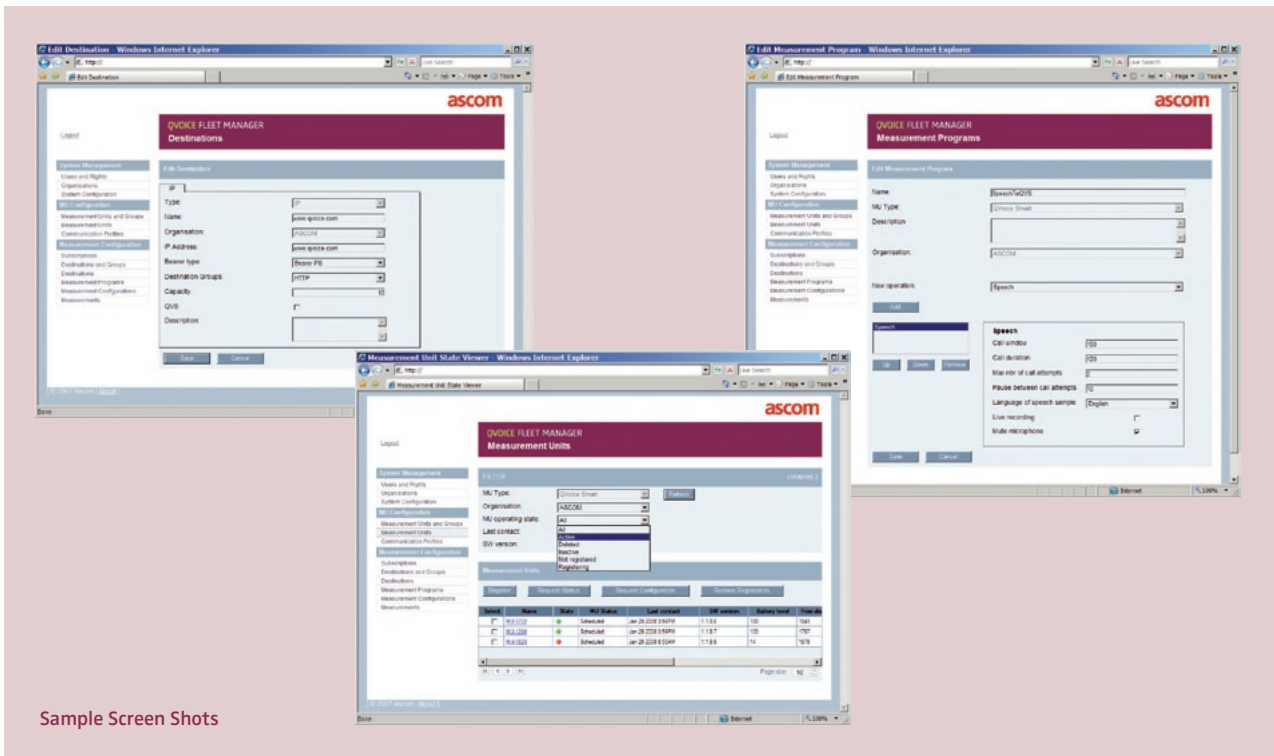
QVoice Fleet Manager is a server application with a Web-based user interface. User access and control is done via a commercial web-browser.

Measuring Sequence

Measurement applications are executed by QVoice Smart units running on Nokia N95 test-phones. Test protocols cover Speech Telephony, SMS, MMS, HTTP, FTP, Ping and WAP and can be grouped together in one measurement configuration.

Controlled and supervised by QVoice Fleet Manager, remotely placed QVoice Smart devices can be configured and scheduled to execute measurement programs autonomously. Communication is over a two-way SMS/FTP path.

At the end of each measurement cycle, QVoice Smart units transfer logged data to a FTP-server which sequentially can automatically relay the results to a QVoice Presentation database.



Sample Screen Shots

QVoice Smart User Modes

User choice, QVoice Smart can be used in Manual mode or in Automatic mode.

In **Automatic Mode** QVoice Smart units are under full control of the QVoice Fleet Manager – from program scheduling to data transfers. The ‘Smart’ phone user, nevertheless, can track measurements on the device GUI; but is blocked from setting up a call or using the phone for private communications.

The user can override the system by switching to Manual mode; bringing to an end automatic testing. Change of status is communicated to the Fleet Manager and the user can then use QVoice Smart for private communications or for locally controlled measurements.

In **Manual Mode**, the phone is open for private communications or manual measurements. The user can locally start and stop a series of pre-programmed QoS measurements; or in passive mode observe air-interface trace/layer 3 data which are displayed and also logged.

After switching back from Manual mode to Automatic mode, a QVoice Smart unit will contact the Fleet Manager, and resume automatic measurements at the start time of the next scheduled task.

Fleet Manager Scalability

The main applications encompass Web-GUI, Server and Communication which can be mirrored and installed on additional hardware. Depending on the number of QVoice Smart devices and the number of users, this modular concept allows system expansion along with growing needs.

Functions of Fleet Manager

The main functionalities can be summarized as follows:

System Administration & Maintenance

- User management
- Organizations with individual resource allocations
- Fleet Manager configuration parameters
- Communication profiles
- System log & -events
- License information

General Configuration

- QVoice Smart
- QVoice Smart-groups, -subgroups
- Subscriptions
- Destinations
- Measurement programs

Measurement Configuration

- Selection of measurement program
- Non referenced speech tests
- Service Tests: IP-data (SMS, MMS, WAP, FTP, Ping etc.)
- Test Groups (QVoice Smart, Destinations ...)
- Scheduler (Start- & stop-time, duration)
- Measurement configuration validation
- Resource verification
- Downloading & dispatching of measurement configurations

Monitoring

- QVoice Smart status table view
- Measurement configuration view
- Statistical result overview
- QVoice Smart map view