

N-Scan™ Access Control System

N-Scan Functional Overview

N-Scan is a cost effective venue access control and patron tracking system developed and supported by Tessitura Network. It was written from the ground up to interact exclusively with Tessitura and as such is very tightly integrated and operates in a way familiar to Tessitura users.

As its core function, N-Scan allows barcode scanning of tickets using a variety of Symbol handheld devices and updates the Tessitura database in real-time over wireless networks. You can also use 'Exit Mode' to scan tickets out and again for re-entry. All expected error conditions (invalid ticket, wrong performance, returned/exchanged ticket, superseded by reprint, etc.) are detected and reported to the user, as well as logged to audit files. There is also support for doors open and close times and specific entry points. If you are in an area not currently within wireless coverage, the tickets can be scanned in 'Offline Mode' and synced back to Tessitura later.

Beyond these fundamental scanning capabilities, N-Scan offers a number of features that make it a valuable portable information tool. These include:

- Ability to have patron messages displayed through the use of Tessitura customer service issues, with issues being properly closed upon confirmed delivery of the message.
- Ability for key members of your staff to establish patron watch lists, using Tessitura constituencies and attributes, and be notified when these patrons are scanned into the facility. Notification can be on a handheld device or any device that can accept an email.
- For patrons on a monitor list, ability to view site customizable real-time bio information directly on the handheld device (subject to Tessitura control group security).
- Ability to view site customizable real-time sales and attendance information directly on the handheld device, similar to Season Overview (subject to Tessitura control group security).

New features are added to N-Scan with each release, and those features are driven by input and ideas from Tessitura users and direct input from field use.

N-Scan Architecture

N-Scan was designed from the start to be flexible and to fit easily into a typical Tessitura environment. In most cases there is no additional server hardware or database licensing required.

There are three primary components to N-Scan:

1. *Tables and Stored Procedures* – Most of the main processing logic exists in SQL stored procedures residing within Tessitura's Impresario database. All N-Scan setup and processing tables are also in this same database. The setup tables are easily exposed within the System Tables module allowing maintenance to be done from within the Tessitura application itself, subject to all native Tessitura application security.

2. *Web Service* – An N-Scan web service is installed on a server running IIS and ASP.NET. This is typically the same server most organizations already have for their Tessitura Web API. This web service is written in Microsoft VB.NET and exposes the required information from the database to the handheld devices, without allowing the handhelds direct access to the database server.
3. *Handheld Scanners* – Symbol wireless handheld devices are loaded with the N-Scan client application. This client application is written in Microsoft VB.NET on the Compact Framework 2.0, allowing it to run on Windows Pocket PC 2003 and Windows Mobile 5.0 devices. The client application requests data from and updates data to the web service over 802.11 wireless networks.

This architecture allows great flexibility in where scanning can occur and what scanning devices are supported. For primary ticket scanning functions we recommend the Symbol MC55 and MC70 model units, although others are available as well. The MC55 is medium duty moderately priced unit that offers light weight, a bright screen, and very good embedded scanner. The MC70 is a heavier duty unit with an optional pistol grip handle attachment. For the non-scanning functions of N-Scan (patron tracking, bio information, and sales figures), any Windows Pocket PC 2003 or Windows Mobile 5.0 device with a wireless connection can be used. This allows lower cost off-the-shelf retail units to be used for these informational functions.

N-Scan Pricing

The three main cost components for N-Scan are *application licensing, handheld device hardware, and installation/training.*

Application Licensing

The N-Scan application pricing is very straight forward. For each Tessitura site, there is a single license for the server-side application components. This license enables you to set up connections to your Live and Test databases. In addition, there is a device license required for each handheld unit that will connect to the system. Specific pricing can be made available upon request.

Handheld Device Hardware

The cost of handhelds can vary substantially depending on the models chosen and the specific options selected. However, there are some guidelines you can use to help with budgeting. We recommend either the Symbol MC50 or Symbol MC70 devices. Specific pricing can be made available upon request.

Installation/Training

Installation and training time also varies depending on what is needed at a particular site. A couple of sites that have solid technical skills and some prior exposure to wireless and scanning have installed the system on their own, with some remote assistance from Tessitura Network. Most feel more comfortable having a Tessitura consultant come on-site to assist with the installation and training. Our recommendation is a two-day on-site visit. In most cases this gives us time to work with your technical staff on the installation and spend some time with your ticketing staff on proper procedures for using the application and caring for the units. Specific pricing can be made available upon request.