

Digital Signage Content Management Solutions



CHALLENGES

- Inability to provide real-time information to end users
- Inability to publish different content to different devices and audiences
- High operating and capex cost by using media and creative agency to provide digital content and templates for upload
- Inconsistent branding experience across multiple locations

SOLUTION

- **Digital signage content management system**
- **Web login features**
 - ▶ Users can access the respective DSCMS modules based on pre-defined access right.
- **Content Management**
 - ▶ Users can upload static and rich media content from local PCs to the content server.
 - ▶ Users can also create specific content type, such as slide show, based on existing uploaded content.
- **Template Management**
 - ▶ Once all the content (uploaded content and real-time screen layout) are ready, screen display layout can be designed and assigned to different type cells in the layout accordingly.
 - ▶ Once a template is confirmed, it can be previewed in a simulator as to whether the final result satisfies its designer.



As the need to provide personalised information across many platforms increases it is important for content management systems to be able to integrate with the various devices and applications. Furthermore the practice of displaying mere static screens with just text, images and movie content is a thing of the past.

NCS' Digital Content Management solution provides users with the ability to manage and publish rich content such as images, video and audio. Users are also able to publish and schedule different content to different groups of devices. Using an open platform, the application allows the flexibility of further integration with other IOT devices and applications such as cameras, queue management system and IPTV contents. This also allows the "pushing" of near real-time information for unscheduled events.



■ Schedule Management

- ▶ Users can schedule multiple templates to be played based on a timeline. The schedule can be one time or recurring.

■ Publishing

- ▶ The scheduled signage display package (including schedule info, layout info and content) can be published to an individual player (including kiosk and i-QMS display device) or a group of players.
- ▶ Once the package is published to the player, it will be stored in the player's local hard disc. Therefore, the player can playback these package even if there is a network failure between the player and the backend server.

■ User Management and Access Control

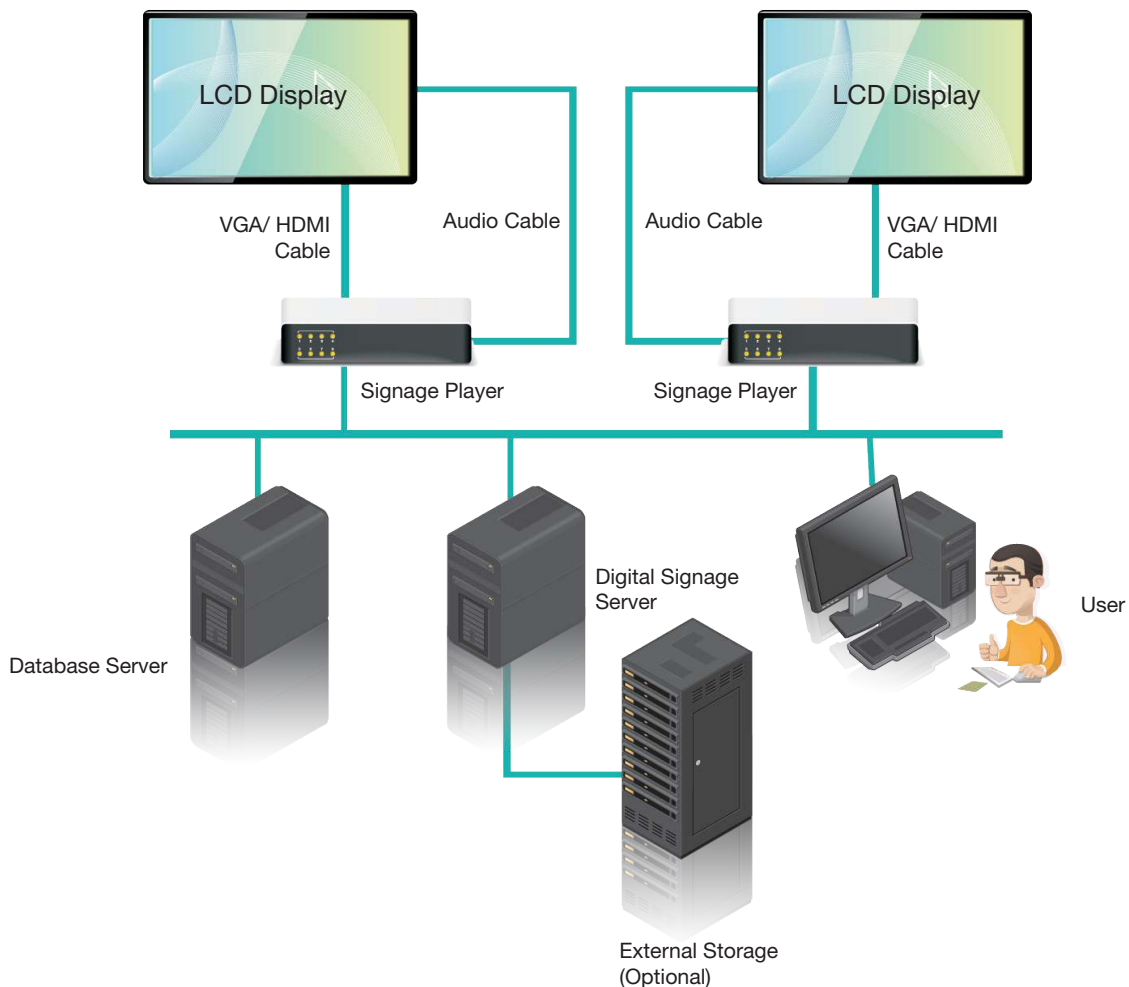
- ▶ The super administrator can manage user profiles and access control level. Certain user can be granted access to only upload content, while another group allowed to design templates and publish it.

■ Device management and reporting

- ▶ All the hardware devices (digital signage, kiosks and i-QMS display devices) are monitored from a device dashboard. Devices with errors are shown in red and SMS/email notification can be sent to support staff.
- ▶ Key actions, activity and usage in the system can be captured and used to generate various types of reports for tracking the system performance, audit trail and analysis of the business workflow.

■ Open Platform

- ▶ Our solutions can be integrated with various systems and devices. Such systems include interactive kiosks solution, queue management and IPTV solutions.
- ▶ The Digital Signage Player communicates to the backend via standard http protocol.
- ▶ Signage App: This is a software application that is running on the digital signage player.
- ▶ Device Monitor Application: This is a software application. It monitors the devices status and controls the signage, running on the digital signage player.





▪ **Backend Servers Application (Web/App/Database)**

- ▶ DSCMS Web Portal: This is a web based application (ASP.NET MVC running via IIS) and handles all the content/layout/template/publish related workflow.
- ▶ File Management Service: This a Windows service running which processes the media files uploaded from DSCMS portal.
- ▶ Monitoring Service: This a Windows service running in Digital Signage Servers, which monitors the device related activities.
- ▶ The application module in the digital signage servers consists of authentication, content management, signage management, user management, device management, system configuration, access control, report module and audit trail module.
- ▶ The database is essentially used to store all the application data (metadata as well as media files).

Upload New Media ✕

Media Information

Media: Browse...

Media Name:

Description:

Effective Date: 📅

Expiry Date: 📅

Tag:

User Group:

- Content Manager Group 1
- Content Manager Group 2
- Content Manager Group 3
- Counter Staff Group
- JO Group
- Operator Group
- SystemAdminRole1

Uploaded By: System Admin 1

Email: abc@abc.com

Dashboard Media Layout Playlist Publish Users System Report Kiosk Configuration

Media

Media Content Overview

Media Type: Media Name:

Media Status: Uploaded By:

Effective Date: 📅 Media Tag:

Media Name	Media Type	Uploaded By	Expiry Date	Effective Date	Thumbnail	Status	Action
Logo	Image	sysadmin1	31/12/2014	19/02/2014		Ready	Manage
desert	Image	superadmin		25/08/2014		Ready	Manage
flower 1	Image	superadmin		25/08/2014		Ready	Manage
CrimeWatch	Video	superadmin	31/12/2014	19/02/2014		Ready	Manage
26_01_2014 - STSUT - LIFE - 13	PDF	sysadmin1		12/02/2014		Ready	Manage
Nurses	Image	sysadmin1		12/02/2014		Ready	Manage



BENEFITS

■ Transportation Sector

- ▶ Provide information on wait times thus enhancing travel experience, while engaging passengers with news.
- ▶ Deliver real-time location-based information.
- ▶ Improve operating costs by reducing workload of content reuse and upload.
- ▶ Provide emergency notifications.

■ Banking Sector

- ▶ Reduce perceived waiting times in queues.
- ▶ Ensure consistent brand messaging across different branches.
- ▶ Increase cross selling of products.
- ▶ Allow for customisation of locations and regions.

■ Retail Sector

- ▶ Create an interactive, engaging and personalised experience for shoppers.
- ▶ Improve customer engagement through multiple media platforms and devices.
- ▶ Reduce manpower cost by enabling quick modification of advertisements.

■ Education Sector

- ▶ Help schools to cost effectively communicate with students in real-time.
- ▶ Improve school safety by connecting with emergency notifications and alarms.