

*Digital Signage Application
on i.MX6 Android Platform*



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Abstract

Digital signage is the remote-controlled distribution and playback of digital content (TV programs, advertising, menus, and every sort of information,) on networks of displays. These displays can range from digital billboards to much smaller screens, either at a single location or across multiple sites. It's all about targeting the audience with relevant information. Digital signage enables users to display their messages more dynamically and targeted.

iWave Systems has demonstrated a Digital Signage application on android platform. The application provides the features of updating the content from remote web browser, playback of video content, image, HTML web pages and scrolling text messages. The application is demonstrated on iWave's i.MX6 Pico ITX digital signage platform based on Freescale's i.MX6 Multimedia application processor.

System Overview:

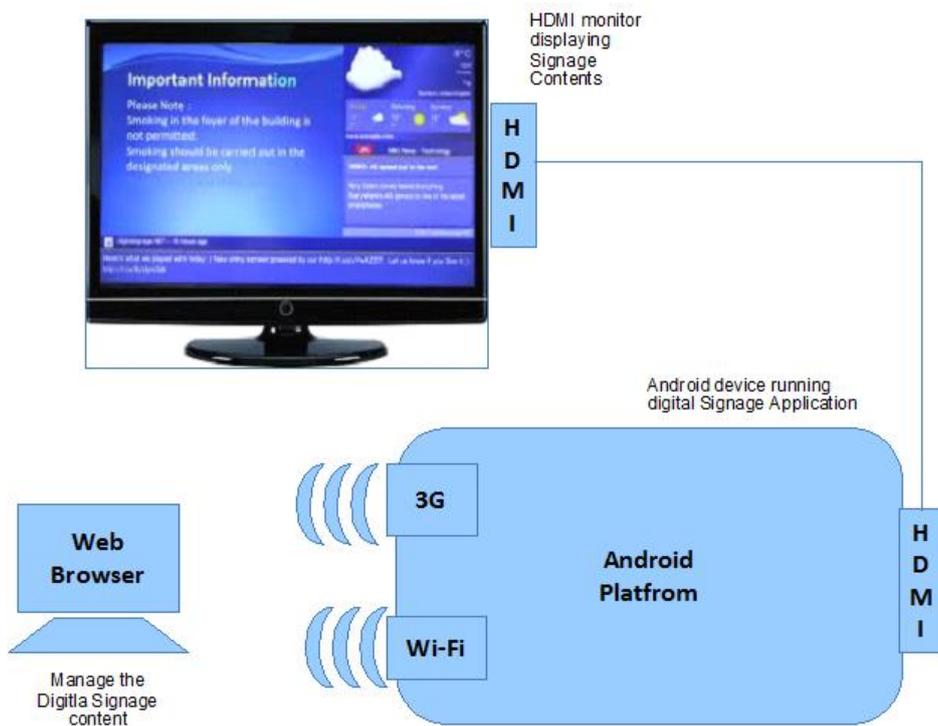
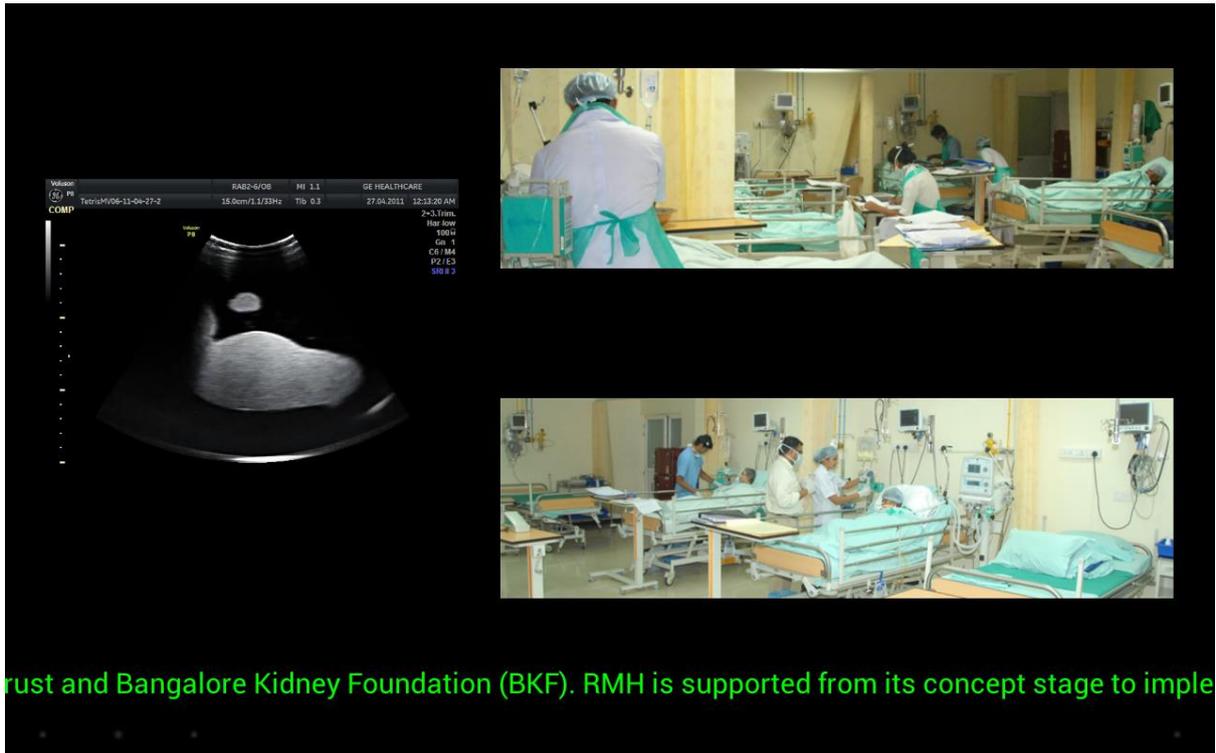


Figure 1: Digital Signage Application block diagram



Trust and Bangalore Kidney Foundation (BKF). RMH is supported from its concept stage to imple

Figure 2: Digital Signage Application displaying video /image contents

Manage Contents

[Manage Screens](#)

File name	Type	Order	Screen Time(Seconds)	Scheduled_Time(Start-End Time)	Emergency	GUEST GROUP	
Big_Buck_Bunny.mp4	Video	0	✓		✓	☐	
DigitalSignageApplication.txt	Text	0	✓	05/23/2013 14:53	05/23/2013 14:59	✓	☐
about_hospital.txt	Text	0	✓	05/23/2013 14:53	05/23/2013 14:59	✓	☐
banner1.jpg	Image	0	✓ 10	05/23/2013 14:53	05/23/2013 14:59	✓	☐
banner2.jpg	Image	0	✓ 10	05/23/2013 14:53	05/23/2013 14:59	✓	☐
clustor.png	Image	0	✓ 10			✓	☐
download.jpg	Image	0	✓ 10	05/23/2013 14:56	05/23/2013 15:59	✓	☐
ic_call.png	Image	0	✓ 10	05/23/2013 14:56	05/23/2013 15:59	✓	☐
player_bg.jpg	Image	0	✓ 10			✓	☐
output.mp4	Video	0	✓	05/23/2013 14:59	05/23/2013 15:10	✓	☐
chance_of_rain.png	Image	0	✓ 10	05/23/2013 14:59	05/23/2013 15:30	✓	☐
ic_back.jpg	Image	0	✓ 10	05/23/2013 14:59	05/23/2013 15:30	✓	☐
down_arrow.jpg	Image	0	✓ 10	05/23/2013 14:59	05/23/2013 15:30	✓	☐
bumpy_bricks_public_domain.jpg	Image	0	✓ 10			✓	☐

[logout](#)

Figure 3: Web interface to manage the Digital Signage contents

Why to use Digital Signage:

Traditional or static signs require physically changing and reprinting the sign (Image/Notice), whereas digital signage can be changed easily on the fly through your digital network or internet connection. Digital signage can incorporate animations, videos, interactive touch screens. With all

of these capabilities, digital signage is far more engaging, informative, and targeted than printed media, and can completely change how you communicate with your audience.

Application Features:

1. Application is developed in android and can be installed on any android device (iWave custom platform, Android tablet/smart phone).
2. Application consists of a Server-Client Architecture model.
3. The server will hold content to be displayed, such as Video, Image, Text & HTML pages.
4. Clients will query the server and download the content to local storage and play the files continuously in a loop. When there is new content, it will be added automatically to the client play list.
5. Any web browser can be used to upload new content or change the display time (Time for which content need to be displayed)by connecting to the server.
6. If server or connection is down, then client will continue to show previously downloaded content.
7. Application will provide a option to schedule the contents, display the emergency content, social feeds.
8. Application will provide a option to user to select number of contents (Video/image) to display at once.

Benefits:

1. User can manage Digital Signage content from any web browser connected same network
2. Digital Signage displays can be programmed with animations, videos and sound digital signs grab the attention of the audience far better than a simple static sign.
3. Unlike static signage, digital displays can deliver an up to date and focused message directly to the target audience.
4. Centralized control of the digital signage network allows control of hundreds or thousands of displays from one location. This ensures quality and consistency with minimal resources required to manage the network.
5. Digital signage allows content changes as often as needed without any additional cost.
6. Digital signage can eliminate the cost of printing and distributing static signs and fliers.
7. Digital Signage can be easily adapted to the specific demographics of the target audience.

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