

Multimedia Usability

Descriptions

Multimedia can be defined as the integration of graphics, audio, video, and text to create a mobile application. Your multimedia design should be simple so users can easily understand. Symbian S60 is providing multimedia facilities which enable sound and graphics in your application.

The multimedia architecture of S60 has been designed and optimized for mobile devices. It's having a rich feature set more akin to a desktop computing environment. With relative ease the different components can be used for numerous tasks, ranging from drawing simple shape primitives to playing ring tones.

Following are the main topics:

- There are major 3 components of Symbian S60 graphics architecture.

1. Window server
2. Font & Bitmap Server
3. Multimedia server.

- There are lots of basic APIs by using them you change the brush type, brush color, pen color, pen style. By using them you can draw different types of colored lines across the screen.
- There are lots of APIs available which allow you to draw basic shapes in your application like circle, ellipse, square, arcs, pies & many more.
- There are a number of fonts available which makes your application look good. In the third edition device Symbian supports TTF fonts, you can also install TTF fonts on a phone and use them, which give you flexibility to use custom fonts. In the second edition device you can achieve this by using GDR files. You will easily find the code to use GDR & how to install TTF fonts in mobile on forum.
- You can also display bitmaps in your application. You can also show the transparent image by drawing with its mask. You can display & access the image in your Symbian application. There are several ways to do it, one of the simple ways is using mbm files. MBM stands for Multi-Bitmaps and it is a Symbian-specific format to hold bitmaps. Several images of different resolutions and different colors can be stored in a single mbm file. One can load images from an mbm file by specifying the image index value. You will find lots of sources on how to use mbm files.
- The animation architecture, and techniques that help to produce smooth animations, such as using off-screen bitmaps, and double buffering. The Direct Screen Access Framework, which is particularly useful for fast animation games programming, is also introduced.
- You can also apply some operations on images, like rotation, scaling. You can also convert the type of image.
- You can add sound to your application. Both recording sound and playing sound. You can play any mp3, wav, file in your application. APIs are available in Symbian S60.
- You can play video files in your application. You can play standard format videos on mobile supported by mobile phones.
- While multimedia may be one of the most powerful communication tools for an application, but poorly designed multimedia applications can create a poor application.

Some usability guideline

- Complex multimedia design or overuse of different media can confuse the user as too much information flows.
- It should be designed in a way that the main objective or functionality of the application gets sufficient attention. If you are playing a gif file in your application it should be placed and designed the way that it does not affect the user's attention on the application task.
- If you are playing audio or video files on any key press, on the first time start you should set the volume to the average level. You should not set the maximum level as the user may have not expected that.
- Application developers also have to take care about memory. You should have to limit the usage of images, audio, video files as they take much memory. Applications should not load very big size of audio/video files at a single time. You can load it in part by part in memory.
- You should limit the usage of multimedia as application performance doesn't get affected.
- You should use proper combinations of colors, as you should not use any color, which makes your application look bad. For example, you can not use black text color on a black background color.
- You should not use so much stylish fonts that can not be read easily by users.
- Proper design & use of multimedia can make your application look really good but in reverse improper design of multimedia can make your application look dull, poor & slow.

Related links

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