White Paper

Introducing mobilEBabble® from AvanGuard® Solutions Inc.

The Public Forum Chat System

Public Forum Chat System (PFCS) is the term we at AvanGuard Solutions have adopted to describe the mix of hardware and software more commonly referred to as the "Text to Big Screen" application. In its most generic form, a PFCS is a large display screen set up in a public area connected in such a way to allow individuals to send messages which appear on the screen. While PFCS's have been noticeable in Europe and Asia for a few years now, only recently have they begun appearing in the sports arenas and concert venues of North America. This is undoubtedly related to the fact that North America has been significantly slower in its adoption digital wireless communication technology.

The traditional *Personal Computer* (PC) based chat application has been with us since the arrival of the internet and the World Wide Web. PC-based chat was developed as a means to provide real-time text communication between solitary computer users. The users of a PFCS are, however, likely to be co-located. That is, all present in the same location and within visibility of one or more large display screens. Any user with an appropriate communications device, such as a mobile phone, has access to the large screen. The goal of the PFCS is to give each individual user the ability to "speak to the crowd." Essentially, the PFCS is the result of a marriage between the traditional PC based chat application and the now ubiquitous mobile communications device with its text messaging capability.

In some sense the PFCS is a solution in search of a problem. It has not appeared as the answer to a particular technical or business need, but instead is a logical blending of existing solutions. Large screen public forum display technology such as the Jumbotron® evolved primarily to satisfy the needs of event advertisers. *Short Message Service* (SMS) text messaging was developed to enable the exchange of short text messages between mobile communication device users, and as previously mentioned PC-based chat gave PC users real-time text based communication at a time when the alternative, email exchange, was anything but instantaneous. The amalgam of these three technologies, the PFCS, falls into an application niche that is quite different from either of its constituent parts. The uses of the PFCS application are varied and many. In short, anywhere people gather in large numbers and want to be "heard" represents a potential opportunity for the PFCS. It is exactly this wide open landscape of possible applications for PFCS technology that we at AvanGuard Solutions are excited about.

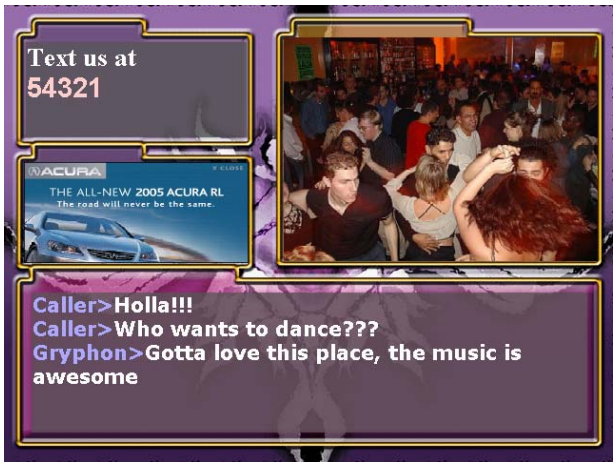
Applications of PFCS Technology

To cite a few examples of current and past applications of PFCS technology;

- "The Manchester Poetry Festival has teamed up with the BBC Big Screen in Exchange Square to give everyone in the city the chance of literary fame." [1]
- "Sony Ericsson will also be hosting the 'Text the Fest' Jumbotron screens on [sic] either side of the main stage, which were hugely popular last year and received 25,000 text messages." [2]

This is just a sampling of recent events employing PFCS technology. From rock concerts to poetry festivals, there are a myriad of potential PFCS applications.

Enter mobilEBabble®



In canvassing currently available PFCS technology solutions one finds that the majority represent fairly simplistic approaches to the problem, not going much beyond message receiving and displaying. Support for advertising is typically limited to one or more simple advertising panels which co-habit the display screen along with a message panel, but the messaging and advertising components are otherwise unrelated. One PFCS solution our researchers looked at in detail proved not to be an integrated application at all but instead an assembly of disparate pre-existing application components, requiring the operator to manage these components separately. Additionally, special hardware requirements made this solution somewhat less than portable.

mobilEBabble is among the first of the PFCS solutions conceived from the outset as such. AvanGuard Solutions was originally approached in the second half of 2004 by a client who had been struggling with the limitations and idiosyncrasies of the PFCS they had been using on a rap concert series earlier that year. These discussions eventually resulted in a set of requirements and a proposal for the PFCS that was to become mobilEBabble. The AvanGuard mobilEBabble development team was charged with achieving these basic objectives:

- After-Event Marketing Support
- Display Customizability
- Support for a Wide Variety of Advertising Media
- Portability
- Robust Architecture

[1] http://www.bbc.co.uk/manchester/content/articles/2004/10/04/big_screen_poetry_text_literature_feature.shtml
[2] http://about.virginmobile.com/about/media/news/sponsorship/2002/2002-05-29/

After-Event Marketing Support

Perhaps the most significant aspect differentiating mobilEBabble from other PFCS solutions is its support for after-event marketing. Residing on a central mobilEBabble database and underlying the messaging function is a set of structures that support after-event marketing. When a wireless device user sends an SMS or email message through the mobilEBabble system, that user's telephone number or email address is added to the mobilEBabble database. Also resident in the database is information about the event itself; when and where the event is being held, what kind of event it is, which artists or celebrities are appearing at the event, etc. The mobilEBabble database maintains an association between message senders and the events they attend thereby allowing targeted after-event marketing. In support of after-event marketing, mobilEBabble also features built-in mass messaging.

Display Customizability

At the outset we knew we wanted the big screen display to be attractive, but owing to the fact that "attractive" means different things to different people we decided that it should be fully customizable. mobilEBabble achieves customizability through the use of the familiar "skin" metaphor. Skins define the sizes and positions of the chat and advertisement panels, the color scheme, background image, panel border style, fonts that appear on the big screen display, etc. For a more detailed description of how skins are used, please refer to the mobilEBabble skin definitions document.

Support for a Wide Variety of Advertising Media

We wanted the advertisement panels to provide support for all of the popular digital media formats currently available. The advertisement display subsystem uses plug-in components which enable mobilEBabble to support a wide variety of digital media formats including html, jpeg, mpeg, bmp, mov, swf, and avi to name a few, and the plug-in approach allows for relative ease when incorporating new formats. Additionally, real-time video feed is supported with the appropriate hardware.

Portability

mobilEBabble is nearly as portable as the mobile messaging devices using the system. With the exception of the large screen display, which in many cases is provided by the venue, the mobilEBabble client application will run on an average notebook computer. The only additional requirement is a wired or wireless connection to the internet. mobilEBabble owes its portability to its client-server architecture and the fact that the core system functionality resides on a central server. This enables the actual client component to be fairly lightweight, concerned primarily with the displaying of messages and advertisements. A fully functional version of the application, including the big screen, can be set up by coupling a notebook computer with a portable LCD projector.

Robust Architecture

The ability of a system to perform well under stressful conditions as well as the ease with which it can be enhanced to provide new features are both measures of architectural robustness. mobilEBabble employs client-server architecture and was designed using object-oriented tools and techniques. It uses the same technologies found in large scale business applications. Because of this mobilEBabble is well suited to high throughput use and readily lends itself to enhancement in scale and function.

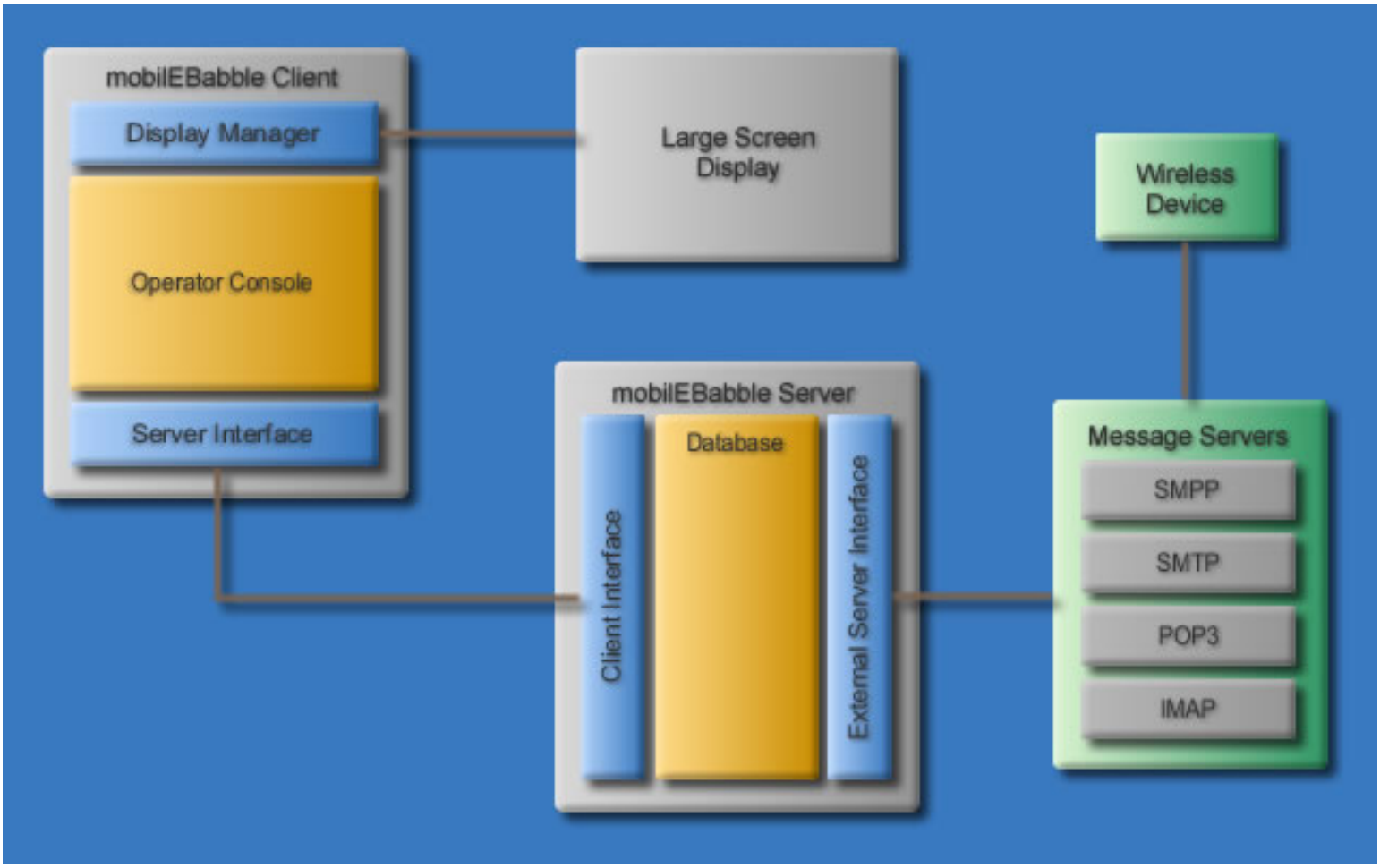


Figure 1. mobileBabble Architecture

Additional mobilEBabble Features

- The integration of cellular phone and digital camera is a relatively recent phenomenon. mobilEBabble will receive and display on the big screen, picture messages as well as regular SMS text messages.
- mobilEBabble also provides support for messages from an email client.
- mobilEBabble supports live video feeds to be features on the display unit. These video feeds can be in the form of cameras, live television and various other video capture devices.
- The operator of mobilEBabble can decide on a message-by-message basis which messages should be displayed on the big screen and which ones need to be discarded. The operator can also interact with the crowd by posting his/her own messages, or by sending messages and binary content directly to mobile devices. mobilEBabble also provides a customizable profanity filter that can be used when the system is operating unattended.
- Support is provided for a variety of big screen display types and resolutions. mobilEBabble will drive everything from low resolutions LED displays like the Jumbotron to high resolution multi-screen displays.
- mobilEBabble integrates the advertising and messaging functions into a single server-resident database. Advertisements that end up being displayed on the big screen reside in the server database and are downloaded to the mobilEBabble client application some time prior to use. This centralization provides for control and tracking of what ads get displayed when and at which events.
- A Web based server application provides for the set-up, maintenance and monitoring of events, address lists, mass mailings, and other application functions and data.
- Client satisfaction is a basic tenant of the AvanGuard Solutions mission. In this regard we offer a variety of customer service plans to assist our clients in getting the most from their investment in mobilEBabble.

Summary

The PFCS or “text to big screen” application is a blending of the technologies found in PC-based chat systems, wireless device text messaging and public venue, large screen advertising. As mobile communication devices become ubiquitous a myriad of potential applications for PFCS technology will arise. AvanGuard’s mobilEBabble is among the first integrated PFCS solutions specifically designed as such. Developed in response to client requirements, mobileBabble is designed to be portable, customizable, provide for after-event marketing, support a wide variety of advertising media, and is architected for performance and scalability. Additional features include support for; picture messages, outgoing messages, mass messaging, and a wide range of display types and resolutions. To facilitate the user’s transition to mobilEBabble, AvanGuard Solutions offers several customer support arrangements including 24-hour toll-free and on-sight support, installation, and training services.

For complete product information, visit www.mobilEBabble.com.

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AvanGuard Solutions is a cooperative, project oriented company whose activities encompass a broad range of products and services. In addition to our software product suite, we provide complete life cycle software development and consulting services, technical writing and graphic design. In the humanities we are involved in creative writing, music production, photography and fine arts. In terms of industrial expertise we have provided services to software companies, major financial institutions, telecommunications companies, utilities, law firms, special effects studios, record companies, and computer game companies to name a few.

More Information about AvanGuard Solutions can be found on the Web at:
www.AvanGuardSolutions.com

For additional information about mobilEBabble or other AvanGuard products and services, contact your AvanGuard Solutions representative, or call 888-493-6060 from anywhere in North America.