Social Connections Using Bing Map

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Abstract

In the modern technology world, impact of social networking on people is notable. It changed the thought process and increased the relationship among people. It made the world look so small. Still the knowledge and effective implication of social networking lies far behind. People are diverted by the vast amount of information and are not using the social networking in an effective way. The main Objective of our application is to ease the basic activities of the common people and to enable them to do a productive business. We feel the present social networking sites lacks presenting information with clarity and henceforth we are reinventing the idea of social networking. The idea behind our application is to take the entire social networking structure to a map. In other words, the end users primary interface for the application will be a map. Thus we provide ***ECOMMERCE +BLOGGING + MAPS + PEOPLE****. The users of the system are the common people, Business people, Active Bloggers.*

1. Introduction

Long before it became the commercialized mass information and entertainment juggernaut it is today, long before it was accessible to the general public, and certainly many years before Al Gore claimed he "took the initiative in creating" it, the Internets and its predecessors were a focal point for social interactivity. Granted, computer networking was initially envisioned in the heyday of The Beatles as a military-centric command and control scheme. But as it expanded beyond just a privileged few hubs and nodes, so too did the idea that connected computers might also make a great forum for discussing mutual topics of interest, and perhaps even meeting or renewing acquaintances with other humans. In the 1970s, that process began in earnest.

Mullets may have reigned supreme in the late '70s and early '80s, but as many will surely recall computers were a far rarer commodity. The machines' language was bewildering, and their potential seemingly limited. What's more, this whole sitting-in-front-of-a-keyboard thing was so isolationistic. Put all this together and you have a medium where only the most ardent enthusiasts and techno-babbling hobbyists dared tread. It was, in effect, a breeding ground for pocket-protector-wearing societal rejects, or nerds. And boring, reclusive nerds at that. Yet it also was during this time, and with a parade of purportedly antisocial geeks at the helm, that the very gregarious notion of social networking would take its first steps towards becoming the omnipresent cultural phenomenon we know and love in 2009.

2. Timeline of Social Networks

Since their introduction, social networking sites (SNS) have attracted millions of users, whereby many people integrate these sites into their daily practices. Here is a timeline to show the progress of the social networking world. In the early days of social, there was BBS or Bulletin Board System. This was one of the first ways that people used the internet to send messages back and forth, and upload data to share with one another. It's like the first Facebook! That was back in the 1970s though, and things have definitely changed. Moving into the 80s, there was GEnie, an online forum where people had discussions and played games – but without any graphics. GEnie was text-based, and although it was social, it died out in the 90s. And the 90s were indeed a time of social revolution – out with the old and in with the new.

Craigslist dominated in the 90s, along with Geocities and America Online. In the late 90s ICQ took center stage, followed shortly by LiveJournal. Moving into the 2000s, networks that more closely resemble what we call "social networks" today started popping up: Habbo, Friendster, LinkedIn and MySpace. Then, of course, there's Facebook's birth in 2004, followed by Twitter in 2006. And, following the timeline right to 2011-2012, the newest members of the social club are Google+ and getlunched.com.

3. Bing Maps

Bing Maps (previously *Live Search Maps*, *Windows Live Maps*, *Windows Live Local*, and *MSN Virtual Earth*) is a web mapping service provided as a part of Microsoft's Bing suite of search engines and powered by the Bing Maps for Enterprise framework.

3.1.1 Bing map for store apps

Bing Maps for Windows Store apps combine the power of Windows 8 and Bing™ Maps to provide an enhanced mapping experience for Windows Store apps. Developers can use this Bing Maps control to incorporate the latest road maps, aerial views, and low-angle high-resolution images into a Windows Store app. The Bing Maps SDK for JavaScript is based on the Bing Maps AJAX Control 7.0 web control. If you have any experience using the web control you will find the Bing Maps JavaScript SDK for Windows Store Apps nearly identical to use.

Figure 1. Bing Map

3.1.2 Location Services

There are two ways to go about using the location services in Windows 8. The first method consists of using the *Windows.Devices.Geolocation.Geolocator*class and provides all the functionality needed to access the Location services on a Windows 8 device. This class has lots of features and options, but can be a bit more complex than needed. The second method consists of using the *GeoLocationProvider*class, which is made available in the Bing Maps control. The benefit of using this class is that it really simplifies integration with the Location services and will also generate an accuracy circle on the map for us. In this exercise we will use this approach for the sake of simplicity.

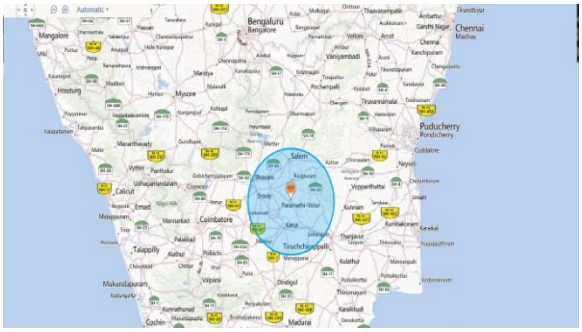

Figure 2. Location Service in Bing Map

3.1.3 Bing Map SDK

Bing Maps SDK for Windows Store apps combine the power of Windows 8 and Bing™ Maps to provide an enhanced mapping experience for modern-style apps. Developers can use this Bing Maps control to incorporate the latest road maps and aerial views into a Windows Store app. This SDK includes controls for apps built using JavaScript, as well as apps built using C#, C++, and Visual Basic, and requires a Bing Maps Key for a Windows Store app.

Figure 3. Bing Map SDK Logo

4. Intuitive Start

To give the app a fast and fluid launch we pull all the application loading contents behind the splash screen layer and when the app is ready we remove the splash screen, thus providing an intuitive start. We use the Extended Splash Screen in the application.

Figure 4. Extended Splash Screen

5. Account Support

Login provides the authentication for users to use the application. For login one must have accounts from any one of the below sites.

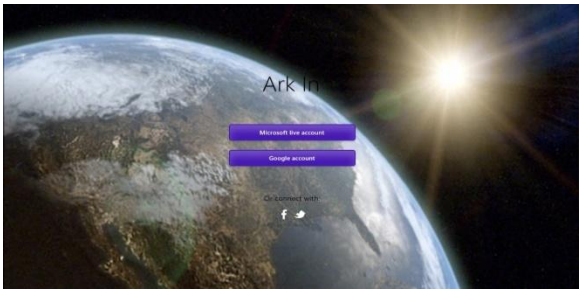

Figure 5. Login Module

5.1 Microsoft Account

People can sign in using their live or Hotmail ID or any other Microsoft associated ID to login to the application. The logic behind is the application use the native API's of Microsoft account and authenticate the users to use the application.

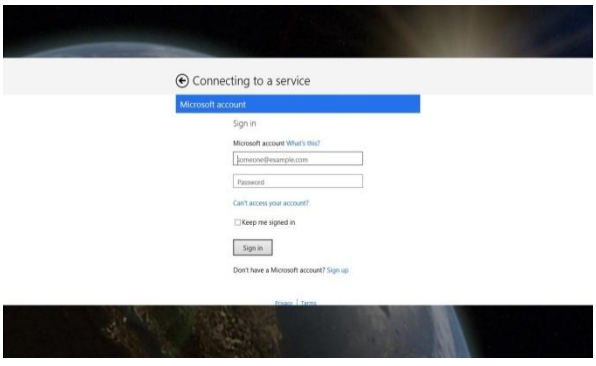

Figure 6. Microsoft Account

5.2 Google Account

Google account is a common account which most people would use frequently. The users who wish to use the application can use their Gmail ID and password to login via the native Google API.

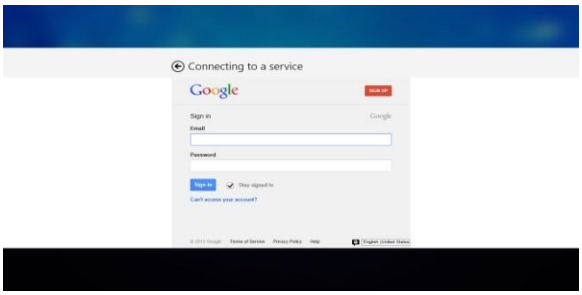

Figure 7. Google Account

5.3 Facebook Account

Facebook is one of the most successful social networking sites which many active bloggers and common people use in their life. The application also provides the authentication via Facebook API for users to use the application.

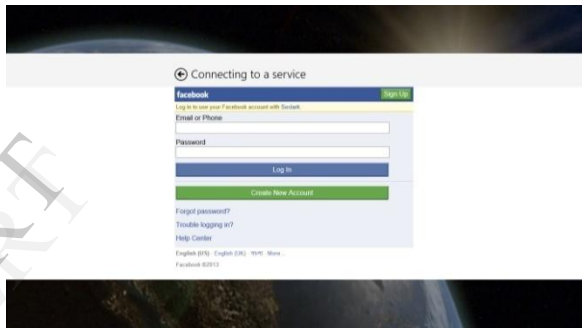

Figure 8. Facebook Account

5.4 Twitter Account

Twitter is one of the common social networking sites which many celebrities use commonly to share their thoughts which are followed by many people. It redefined the concept of social networking using "**tweets**". Twitter account can also be used to login to the application. This is by using the twitter API to allow users to authenticate via the twitter account to user the application.

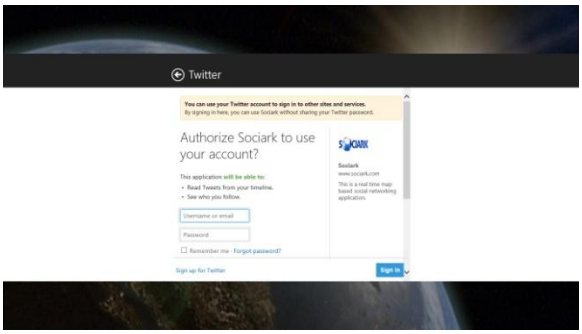

Figure 9. Twitter Account

6. User Experience

Users using the application can have a smooth and fluid usage powered by the Enhanced GUI which is built to ease the tasks and also users understanding capabilities. The two interfaces used in the application are Grid Interface, Hub Interface.

6.1 Grid Interface

Grid interface is the one that loads after the user login to the application. Grids are placed each indicating the different activities that can be done using the application. The users can proceed to the corresponding activity by clicking the associated Grid.

6.2 Hub Interface

Hub interface makes use of grid functionality to categories the activities that could be accessed through the application. Each grid show the different activities and be clicking user can view the current status of the activities around the world.

7. APPLICATION FUNCTIONALITIES

Application functionalities can be accessed using app bars. The appbar's are of three types: Bottom appbar, Top appbar, Top and Bottom Appbar. The appbar used in the application is bottom appbar.

7.1 App Bar

An appbar can be invoked by right clicking in a pc or by swiping up in tablet or mobile phones. The app functionalities you can access using an appbar are as follows:

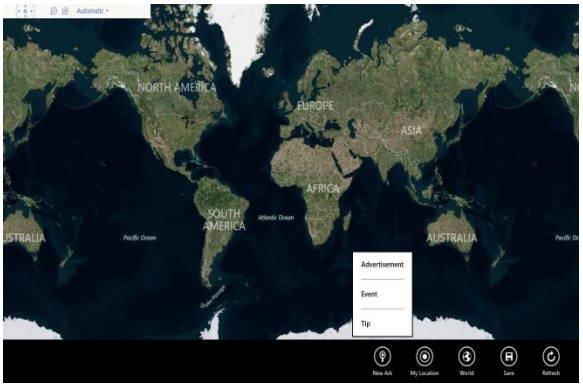

Figure 10. Appbar integrated in Bing Map

7.1.1 New Ark

New Ark provides a user an option to add an advertisement, tip, issues or event. When he chooses the functionalities a pin marker appears on the map. He can drag the pin to the intended location and click the save button to add the details.

7.1.2 My Location

My Location makes use of Location Services functionality of Bing Map to show the location of the user using the built in GPS device in the users device.

7.1.3World

World will zoom out and shows the user the whole map. This functionality can be used to zoom out and view the activities in the whole world.

7.1.4 Save

After users drag the push marker to the intended location, he clicks save which displays a message box with two fields, one is title where user can enter the Title of the marker and Message where he can type the intended message.

7.1.5 Refresh

Refresh option will refresh the Bing map to show the posts that are made recently.

8. Application Specific Logics

Windows 8 provides a lot of facilities and support which can be used in the application. Some of these features will not be available in android platforms and not even in IOS platforms. This made many developers to migrate to Windows 8. Some of the windows 8 functionalities used in the application are as follows:

8.1 Snapped View Support

Snapped view reduces the apps window size to use either 75% screen or 25% screen. This enables the user to run two apps at the same time.

If you want to snap the app you were just using, here's how:

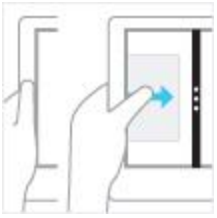

Figure 11. Snap view Tablet

With touch, slide your finger in from the left edge to bring in the second app, and then drag that app to the left or right side of the screen until an opening appears behind it.

Figure 12. Snap View PC's & Laptops

With a mouse, move your pointer into the upper-left corner until the second app appears, and then drag that app to the left or right side of the screen until an opening appears behind it.

If you want to snap a different app that you used recently, here's how:

With touch or a mouse, open a list of recently used apps. Drag the app you want to the left or right side of the screen until an opening appears behind it.

Figure 13. Snap a recent app

8.2 Search Integration

Search integration is accessed by using the charms bar that is invoked when mouse pointer is moved to the top right side corner of the screen in PC's and by swiping on top right side corner in a tablet. User can use this feature to search the places in the Bing map.

8.3 Universal Access

The application can be accessed anywhere through the Windows Store. Windows Store provides access to millions of apps for Windows 8 OS and accessing is very simple. Thus we provide Universal Access to the application

9. Cloud Services

A cloud service is used in the application for the backend purpose. In order to have data available all the time backend of the application is connected to the Azure mobile service which uses the cloud functionalities. This enables the user to have instant access on their posts on Bing map and also to view activities around the world.

9.1 Azure Mobile Services

Azure Mobile Services is a cloud based database service provided by Microsoft. Windows Azure enables you to quickly build, deploy and manage applications across a global network of Microsoft-managed datacenters. You can build applications using any operating system, language or tool.

Figure 14. Azure Mobile Services

9.2 Azure Authentication

Mobile Services eliminates the need to write, configure, and test custom authentication and user management solutions. It's simple to incorporate user authentication through Facebook, Twitter, Microsoft, or Google account. When you stop worrying about infrastructure, you can start focusing on the core experience.

9.3 Push Notifications

With server-side scripting and integrated push support, Mobile Services provide you with an easy way to send push notifications to your app without writing, testing or managing backend infrastructure code.

10. Hardware Support

Hardware Support is one of the key issues to be provided so that users can use the application in

their devices without any issues. This enables the user to run and use application functionalities without any fuss. If the application is developed for particular kind of devices then it hinders other people to use the application. Some of the hardware device supports are as follows:

10.1 ARM Devices

ARM processors are a family of 32-bit microprocessors developed by Advanced RISC Machines, Ltd. in the 1980s. Today ARM processors power a wide variety of electronic devices, including mobile phones, tablets, multimedia players and more. ARM processors are based on a reduced instruction set computer (RISC) architecture, and while they do share the low-end market with processors from AMD and Intel, they aren't designed to compete with these companies' higher-end processors.

10.2 x86 Machines

X86 is the name of a processor instruction set, or collection of operations that a processor is able to perform. These instructions include mathematics and logic calculations, among other types of tasks. Nearly every processor in use today maintains compatibility with the x86 instruction set

10.3 x64 Machines

64-bit refers to the number of bits (the smallest unit of information on a machine) that can be processed or transmitted in parallel, or the number of bits used for single element in a data format. When the term is used in conjunction with a microprocessor, it indicates the width of the registers#&151; a special high-speed storage area within the CPU. A 64-bit microprocessor can process data and memory addresses that are represented by 64 bits. The term is often applied to the following:

- **Microprocessor**: indicates the width of the registers.
- **Graphics device**, such as a scanner or digital camera
- **Operating system**: refers primarily to the number of bits used to represent memory addresses.

11. Conclusion

The application is developed mainly to reinvent the idea of Social Networking and to enable people to use the features of Social Networking in aeffective way. This application is mainly focused on Windows 8 devices which bring many support and functionalities to the application. This application is expected to take Social Networking into another level which may change the trend in the field of Social Networking.

12. References

[1] Kraig Brockschmidt, "*Windows 8 apps with HTML, CSS and JavaScript*", Microsoft Press, Washington, 2012.

[2] Ricky Brundritt, "*Bing Map JavaScript SDK for Windows Store Apps*", 2012.

[3] Social Medias such as facebook, Myspace, Twitter and So.cl