

INFORMATION KIOSK OF SANTA MARIA, ILOCOS SUR

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Chapter I

INTRODUCTION

Project Context

In information technology, a kiosk (pronounced KEE-ahsk) is a small physical structure (often including a computer and a display screen) that displays information for people walking by. Kiosks are common near the entrances of shopping malls in North America where they provide shoppers with directions. Kiosks are also used at trade shows and professional conferences. The word is of Turkish and earlier Persian origin, where it meant an outdoor pavilion or a portico. The kiosks best known to travellers are those that display show and movie posters on the streets of Paris.

More sophisticated kiosks let users interact which include touch screens, sound, and motion video. A number of companies specialize in creating multimedia kiosks. A simple kiosk can be created using HTML pages and graphics, setting the type size large enough to attract people from a short distance, and removing the Web browser's tool bar so that the display screen is effectively in "kiosk mode." The presentation can be designed to simply loop through a series of pages or to allow user interaction and exploration.

In general, the present invention is an information kiosk which provides selective access to the World Wide Web in high traffic areas. Airports, shopping malls, and transportation terminals are among some



of the locations envisioned for Web Information Kiosks. The kiosks regulate access to make the World Wide Web easier and less intimidating to use by focusing the content they provide based upon the location of the kiosk. An information kiosk is disclosed which provides interactive operation with an unfamiliar user. A video display provides instructions and solicited information to the user who enters choices on a keypad input device. The kiosk provides printed information which the user may carry away from the kiosk. Graphic as well as textual information is dispensed by the kiosk. (Kiosk, Randy Kual, April 2005. Last accessed March 9, 2013.)

They describe a novel computer vision application: vision-based human sensing for a Smart Kiosk interface. A Smart Kiosk is a free-standing information dispensing computer appliance capable of engaging in public interactions with multiple people. Vision sensing is a critical component of the kiosk interface, where it is used to determine the context for the interaction. They present a taxonomy of vision problems for a kiosk interface and describe a prototype kiosk which uses color stereo tracking and graphical output to interact with several users. (Vision for a smart kiosk. Rehg, J.M. Last accessed March 9, 2014)

Integration of technology allows kiosks to perform a wide range of functions, evolving into self-service kiosks. For example, kiosks may enable users to enter a public utility bill account number in order to perform an online transaction, or collect cash in exchange for



merchandise. Customized components such as coin hoppers, bill acceptors, card readers and thermal printers enable kiosks to meet the owner's specialized needs. (Kielsen, Keith (2010). Last accessed March 9, 2014)

The use of interactive kiosks allow visitors with a simple method of finding their way to their destination as well as to navigate buildings. These way finder kiosks are typically used in Shopping Malls, Hospitals, City Centers, Airports, large car parking areas and other locations where people can be easily lost, or where traditional directional signage is unavailable or inadequate. Campus Directory and Way finding Kiosks offers a comprehensive solution allowing visitors to easily find personnel, services or destinations at buildings and large-scale campuses. It consists of versatile software with the ability to integrate detailed graphical mapping from the kiosk location to the specific destination. Our Directory and Way finding Kiosks can be developed as a stand-alone kiosk solution, or can be integrated into a more comprehensive campus information kiosk. Information Kiosk manages and presents comprehensive information about building facilities, and directory of personnel in one or more buildings. It includes the individual's last name, first name, department, plus the floor, room and/or suite number of their office. It must be pointed out that in some cases, a member of staff may still be required to give assistance (e.g. for people with certain disabilities, or people adverse to using technology), but with the right



user interface, most people prefer to use a self-service way finding kiosk, and if not the member of staff can use the kiosk as an aid in showing the person the route (sometimes even having a separate secret way of accessing extra features). In all cases, a simple use of interface means that people can find what or where they are looking for, quickly and simply. (<http://www.wayfinderkiosk.com/>, Last accessed March 9, 2014)

The proponents wanted to create a kiosk for tourists or visitors in Sta. Maria. It is designed to help the people have an easier way to locate the different tourist spots and important locations in the municipality. Building this may have a faster communication and delivering details inside and outside the Philippines. It was discussed in the previous paragraph that it consists of versatile software with the ability to integrate detailed graphical mapping from the kiosk location to the specific destination. That is why the proponents promote/proposed this project to help the province and particularly the municipality of Santa. Maria to promote its hidden beauty.

Purpose and Description

Municipal Administration and Employees. This study was conceptualized to reduce the burden of producing antiquated maps in brochures and literatures. Economically and financially, the expenditures shall be lessened by way of doing away with the rhetoric reproduction or printing.



Tourist and Visitors. The information kiosk benefits the tourists who are new or not familiar with the municipality of Santa Maria, Ilocos Sur. It will help them familiarize with the locations and routes of barangays, tourist spots, products, municipal hall and others.

The Proponents. The project proponents are benefited from the study by providing them avenue to put into practical business application the concepts they have learned including multimedia authoring application and research development.

Future Proponents. This study serves as reference for future proponents who are interested in the field of multimedia development.

Objectives of the Study

General

This study aimed to develop an Information Kiosk for Santa Maria, Ilocos Sur.

Specific Objective

1. To identify the best technology to be used in the development of an information kiosk;
2. To design and develop an Information Kiosk for Santa Maria Ilocos Sur using the tools in information technology;
3. To test the usability of Information Kiosk for Santa Maria Ilocos Sur.



Scope and Limitation

This study aimed to create a tourist destination map for the Municipality of Santa Maria to guide the local and foreign tourists to reach the beautiful spots/sceneries of the place that they want to go. The developed system's feature is just like in a mobile phone technology where the user can easily familiarize using it. It has a button that navigates the location of each barangay, tourist spots and one town, one product. The system was limited only on the municipality of Santa Maria, Ilocos Sur. Once the user click the button, the kiosk will start on the state of origin, which is the municipal hall of Santa Maria, and end on its destination.



Chapter II

REVIEW OF LITERATURE

This chapter contains literature and studies, from foreign and local sources, reviewed by the proponents, which have been found relevant to this paper.

Kiosk

According to Ray Jones (2009), kiosks can provide patients with access to health systems in public locations, but with increasing home Internet access their usefulness is questioned. A literature and review identified kiosks used for taking medical histories, health promotion, self-assessment, consumer feedback, patient registration, and patient access to records, and remote consultations. Sited correctly with good interfaces, kiosks can be used by all demographics but many 'projects' have failed to become routine practice. A role remains for: (a) integrated kiosks as part of patient 'flow', (b) opportunistic kiosks to catch people's attention. Both require clear 'ownership' to succeed.

As mentioned from an online article at kiosk4business (2013), museum kiosks have helped to provide a more enjoyable museum learning experience and so have helped museums to provide the 'Value for Money' that visitors are expecting. Museum Kiosks enhance the visitor's experience by delivering detailed information about a particular exhibit or exhibition. The kiosks might show textual information about



the subject, as well as videos and images to increase the users understanding. Videos are particularly helpful to illustrate processes how things were done, for example how to use the Gutenberg printing press – the video can show a step by step of how the process of printing was accomplished on this machine. The benefits of using the kiosk in this way are that the Gutenberg Press doesn't have to be exhibited at the museum for visitors to learn about the machine and how it would have been operated. Functionality would also be available to the user to email the information to themselves to study more in their own time, or they can print off the information displayed on the screen.

Cragun, B. J. (1995) presented a touch screen apparatus with the tactile feedback in disclosed. Tactile information, such as Braille or other symbolic representations, is integrally connected to an area on the touch screen surface. This tactile information can be molded into the touch screen surface as part of its initial manufacturing process, or can be added later by making tactile information out of epoxy or by placing a plastic film containing the tactile information over the touch screen surface. The touch screen display can be part of a desktop or laptop computer, can be part of a computer system in a public information kiosk or automated teller machine application, or can be included as an information panel in stereo equipment and transportation equipment.



Donohue, T. E. (2001) presented a simplified touch pad which detects a "touch" in a specific absolute position programmable zone or "enter/select" zone rather than requiring a "tap". The touch pad also has an audible feedback device built into the touch pad for immediate feedback and a touch sensitive surface comprising a relative cursor positioning zone. By simplifying a touch pad to include only basic functions, the touch pad is easier to operate, simpler to manufacture, and more amenable to use with graphical interface display systems typically using touch screens. The invention is preferably incorporated into a kiosk where simplified use of great benefit.

George Mason University (2014) has two information kiosk: a) The drive-up information kiosk assists visitors to the university by navigating them around the campus and general university information; b) The walk-up information kiosk assists visitors to the university in finding their destinations and giving out general university information.

As mentioned from an online article at Columbia University Information Technology (2014), ColumbiaNet kiosk stations provide easy access to a wide variety of campus information, electronic mail, USB drive access, and access to the Internet. Placed in lobbies, libraries, and lounges across campus, they are accessible to anyone at Columbia. ColumbiaNet kiosk stations are often used for quick access to services



for short periods of time. Using computers for extended periods of time, computer clusters and labs are located throughout the campus.

Adobe Photoshop

Adobe Photoshop is a raster graphics editor developed and published by Adobe Systems for Windows and OS X. Photoshop was created in 1988 by Thomas and John Knoll. Since then, it has become the *de facto* industry standard in raster graphics editing, such that the terms "photoshopping" and "photoshop contest" were born. It can edit and compose raster images in multiple layers and supports masks, alpha compositing and several color models including RGB, CMYK, Lab color space (with capital L), spot color and duotone. Photoshop has vast support for graphic file formats but also uses its own PSD and PSB file formats which support all the aforementioned features. In addition to raster graphics, it has limited abilities to edit or render text, vector graphics (especially through clipping path), 3D graphics and video. Photoshop's feature set can be expanded by Photoshop plug-ins, programs developed and distributed independently of Photoshop that can run inside it and offer new or enhanced features.

(http://en.wikipedia.org/wiki/Adobe_Photoshop, 2015)

Adobe Flash

Adobe Flash is formerly called Macromedia Flash and Shockwave Flash) is a multimedia and software platform used for creating vector



graphics, animation, games and rich Internet applications (RIAs) that can be viewed, played and executed in Adobe Flash Player. Flash is frequently used to serve streaming media, advertisement and interactive multimedia content on web pages and Flash-enabled software. However, usage of Flash on websites is declining.

Flash manipulates vector and raster graphics to provide animation of text, drawings, and still images. It allows bidirectional streaming of audio and video, and it can capture mouse, keyboard, microphone and camera input. Interactive Flash animations are created using the object-oriented language called ActionScript. Flash content can be developed using an IDE such Adobe Flash Professional. Adobe's attempt to foster open source Flash development appears to have been abandoned.

Adobe Flash Player makes Flash contents accessible on Windows, OS X and Linux, some smartphones and tablets, and a few other electronic devices using Flash Lite. It is available free of charge for web browsers as a plug-in. Flash-enabled computer programs can be created with Adobe AIR. (http://en.wikipedia.org/wiki/Adobe_Flash, 2015)

Adobe Flash Player

Adobe Flash Player is a freeware software for viewing multimedia, executing rich Internet applications, and streaming video and audio, content created on the Adobe Flash platform. Flash Player can run from



a web browser as a browser plug-in or on supported mobile devices. Flash Player has a wide user base, with over 90% penetration on internet connected personal computers, and is a common format for games, animations, and GUIs embedded into web pages. Adobe Systems, the developer of Adobe Flash Player, states that more than 400 million of total more than 1 billion connected desktops update to the new version of Flash Player within six weeks of release. Flash Player can be downloaded for free and its plug-in version is available for recent versions of web browsers (such as Internet Explorer, Mozilla Firefox, Google Chrome, Opera and Safari) on selected platforms. Google Chrome distribution comes bundled with the sandboxed Adobe Flash plug-in and will continue to support the plug-in in Windows 8 Metro mode. Each version of Adobe Flash Player is backwards-compatible. (http://en.wikipedia.org/wiki/Adobe_Flash_Player, 2015)

Flash Player includes native support for many different data formats, some of which can only be accessed through the ActionScript scripting interface.

- XML: Flash Player has included native support for XML parsing and generation since version 8. XML data is held in memory as an XML Document Object Model, and can be manipulated using ActionScript. ActionScript 3 also supports ECMAScript for XML (E4X), which allows XML data to be manipulated more easily.



- JSON: Flash Player 11 includes native support for importing and exporting data in the JavaScript Object Notation (JSON) format, which allows interoperability with web Services and JavaScript programs.
- AMF: Flash Player allows cookies to be stored on user's computers, in the form of Local Shared Objects, the Flash equivalent to browser cookies. Flash Player can also natively read and write files in the Action Message Format, the default data format for Local Shared Objects. Since the AMF format specification is published, data can be transferred to and from Flash applications using AMF datasets instead of JSON or XML, reducing the need for parsing and validating such data.
- SWF: The specification for the SWF file format was published by Adobe, enabling the development of the SWX Format project, which utilized the SWF file format and AMF as a means for Flash applications to exchange data with server side applications.^{[12][13]} The SWX system stores data as standard SWF by the code which is automatically interpreted by Flash Player.^[14] Another open-source project, SWXml allows Flash applications to load XML files as native ActionScript objects without any client-side XML parsing, by converting XML files to SWF/AMF on the server.



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