

# PROCEEDINGS

# STSS 2008

## BROADENING HORIZONS THROUGH RESEARCH

3 - 4 June 2008

M.S. Garden Hotel  
Kuantan, Pahang



SCIENCE & TECHNOLOGY

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**PROCEEDINGS OF  
THE NATIONAL SEMINAR ON  
SCIENCE, TECHNOLOGY AND SOCIAL SCIENCES  
2008**

**Science and Technology : Volume 1**

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(ISBN : 978-983-2607-17-5) is published by the Universiti Teknologi, MARA, Pahang.

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Cover Design by:  
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## The Awareness and Interest of UiTM Pahang Population towards the Virtual Tour

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### ABSTRACT

*The development of virtual reality is still expanding which leads to the growth of the increasingly popular virtual tour technology. The use of 360-degree panoramic images that allows people to view the environment without having to physically be at the location has increased with more online users experiencing this technology. This paper describes the awareness of UiTM Pahang population on the technology of virtual tour. It also includes factors that influence the interests of UiTM Pahang population to use this technology. Virtual tour can enhance the presence of UiTM Pahang as well as provide much information to remote and prospective users.*

**Keywords:** *Awareness, interests, UiTM Pahang, virtual tour*

### Introduction

Over a decade, the Internet has gone through tremendous changes of being an unknown technology to becoming the most popular subject in the computer technology nowadays. The growing number of daily users has caused the Internet to become a part of the users' culture. More and more web pages which are more interactive and informative have been created and developed. This includes the creation of virtual tour technology.

Virtual Tour, also known as panoramic tour, is a simulation of an actually existing location, which combines the use of panoramic images, a sequence of hyperlinked stills or video images or virtual models of the real location. Multimedia elements can also be used in the virtual tour such as audio effects, text and narration. Virtual tour is an extension of computer graphics and virtual reality (VR). VR can be defined as "telepresence" or the "projection of a human mind to a remote site" (Larijani, 1994). Some researchers also referred to it as a high-end user interface that involves "immersion, interaction and imagination" (Burdea & Coiffet, 1994).

The first use and the derivation of Virtual Tour date back to 1994 when it was used as a museum visitor interpretation, providing a 'walk-through' of a 3D reconstruction of Dudley castle in England as it was in 1550. This comprised a computer-controlled laser disc based system designed by a British based engineer, Colin Johnson. The system was named "Virtual Tour, being a cross between Virtual Reality and Royal Tour" (Virtual Tour, n.d.).

The use of virtual tour has become so popular nowadays that a lot of areas are using it for a lot of purposes such as in the real estate business where properties could be viewed by the clients on the Internet. The National Association of Realtors found that approximately 80% of home buyers used the Internet as a search and research tool. A survey in January 2005 found that 8 million Americans who found new places to live in the past two years said that the Internet had played a crucial role in helping them through that transition.

In a report by TechWeb Technology News, the Pew organization polled more than 900 adults in November, 2004 which came to the conclusion that 54 million adults used the Internet to venture somewhere else. The tour involves visiting museums, sports arenas and other interesting places. The author of the report has also stated that the growth of broadband connections has made the virtual tours easier to be viewed and encouraged the people to create similar tours with richer tour experiences.

The popularity of virtual tours has increased nowadays especially in the educational area. A lot of universities use virtual tours as a portal where information about the universities can be

spread widely. Huntington University, for example, provides a virtual campus tour at its interactive website. The facility includes a virtual reality tour, where users will explore the terrific campus using interactive panoramic images without requiring any plug-ins. Meanwhile, the University of Alaska provides the facility which allows users to explore any selected location while having full control of the tour. They could view the tour at their own pace.

The main reason why universities use the virtual tour is to show close images of the campus environment in a better, clearer and more comprehensive way in order to attract prospective students.

The latest market report written by Ryan Dezimmer of The Wall Street Journal on 30<sup>th</sup> October 2002 shows that 70% of college-bound high-school juniors began their college search on the Web, and those virtual tours came second only to actual campus visits in luring students.

There are a few types of virtual tours that can be found on the Internet which can be used to represent the campus environment:

- *Text-based virtual tour* provides an accurate sense of space through description of the exhibit. However, it is a simple tour, with no visual aids, allowing it to be inexpensive to create.
- *Photo-based virtual tour* consists of pictures with in-depth text descriptions. This is a simple tour to produce because it involves only pictures and descriptions of exhibits.
- *Panoramic virtual tour* is a tour of 360 degree photos which can exhibit greater feeling of reality for the user. This kind of tour is often high cost due to the need for high quality pictures to ensure the photographs match correctly when patched together.
- *Video-based virtual tour* consists of a video depicting a location, which can use both audio and text descriptions to further enhance the experience. This type of tour can be expensive to produce and difficult to update.
- *Real-time virtual reality tour* is a mixture of video and panoramic tours. It creates a virtual reality experience of a location, where the user can explore 360 degree arrangement of 3-D objects without restrictions on the path they take. This type of tour takes longer time to develop and is often expensive to create.

Opportunities of using virtual tour for the university:

- Bring real life to the computer screen.
- Reach wider audience with no limitation on the opening hours of the university (open 24/7 - 24 hours a day, 7 days a week), anywhere in the world.
- Enable viewers to take the virtual trip to the university at their own time and pace.
- Provide quick and easy update, thus viewers will always be presented with the latest information about the university.
- Save viewers' time by allowing them to pre-qualify the university's facility and avoid wasted visits.
- Convince viewers. The viewers experience being inside the picture they are viewing with the ability to explore their surroundings and control what they see. This allows the viewers to make self-discoveries on what they perceive to be real.

## **The Use of Virtual Tour in UiTM Pahang Website**

Based on the ideas mentioned earlier, panoramic virtual tour has been used to develop the prototype of an interactive web-based virtual tour of UiTM Pahang. The panoramic virtual tour is actually using the concept of panorama-based virtual reality. Panorama-based virtual reality is the combination of computer graphics and virtual reality (Xiao, 2000). Virtual reality can be defined as a technology which allows a user to interact with a computer-simulated environment. Most current virtual reality environments are primarily visual experiences displayed either on a computer screen or through special devices and also include additional sensory information.

## The Awareness of UiTM Pahang Population towards the Virtual Tour Technology

In order to gather information regarding the awareness of UiTM Pahang population towards the virtual tour technology, the survey method was used. Questionnaires were prepared as an evaluation instrument to access the awareness of the technology and distributed among UiTM Pahang citizens.

Fifty (50) respondents had participated in the survey. From the nineteen (19) questions that were asked, five (5) questions were about the users' acceptance towards the virtual tour technology. There were five options to be answered for each question, which are Strongly Agree (5), Agree (4), Average (3), Disagree (2) and Strongly Disagree (1).

After processing the results, the overall mean for user's acceptance is between 4.3 – 4.74, whilst the standard deviation is between 0.49 -1.11.

Table 1: Descriptive Analysis for Every Evaluated Question

No.	Awareness of Virtual Technology				
1.	Have you ever heard about the Virtual Tour Campus?	YES		NO	
		19		31	
2.	Where have you heard about Virtual Tour Campus?	INTERNET	LECTURER	OTHERS	NONE
		13	5	1	31
		Mean		Std. Dev.	
3.	The tour encourages you to know more about UiTM Pahang.	4.3		1.11	
4.	The Virtual Tour Campus gives the user an alternative way to know about UiTM Pahang.	4.62		0.53	
5.	The Virtual Tour Campus is a way to promote UiTM Pahang to the public.	4.74		0.49	

The result from question 1 shows that the respondents do not have much knowledge on the use of virtual tour. It is not a very well-known technology among UiTM Pahang population.

Question 2 describes the source from which the information on virtual tour is obtained. More than half of the respondents were not aware of the existence of the technology.

Responses to questions 3 to 5 indicate users' interests in familiarizing themselves with UiTM Pahang by utilizing the virtual tour. This positive feedback portrays the importance of this technology in reaching out to the mass.

Unfortunately, this technology has not reached our campus yet although it has been used widely by other universities.

## Conclusions

Generally, the respondents were not aware of the existence of the virtual tour technology. After going through the prototype, respondents realized the importance of virtual tour as an alternative way to get to know about UiTM Pahang campus.

The virtual tour has great potentials for educational use where some applications could be embedded such as service promotion, computer-based training and service promotion. Another

interesting element that can be integrated to the tour is multimedia content which includes sound, voice, animation and movies.

The virtual tour can also be used to promote the campus and it is an opportunity to attract the public to UiTM Pahang and show them the unique learning facilities available in the campus such as the Sri Gading reservation forest, the herbal garden that is very useful for the researchers and the wood factory that provides many benefits to the students.

## References

- Burdea, G., & Coiffet, P. (1994). *Virtual reality technologies*. New York: John Wiley & Sons, Inc.
- Larijani, L.C. (1994). *The virtual reality primer*. New York: McGraw-Hill.
- Xiao, D.Y. (2000). Experiencing the library in a panorama virtual reality environment. *Journal of Library Hi Tech*, 177-184.
- Virtual Tour. (n.d.). Retrieved February 25, 2008, from, [http://en.wikipedia.org/wiki/virtual\\_tour](http://en.wikipedia.org/wiki/virtual_tour).
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