Application of Real-Time Streaming Technology in Tour Mediation

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Abstract - **This research adopted streaming technological mediator as additional information source. The streaming component provides live experience on destination attractions to potential tourists to assist them to make informed travel decisions. The streaming component allows potential tourists to authenticate destination attractions and to perform emotional interpretations resulting from cognitive and affective components. The findings of this study contribute the body of knowledge and practice in the tourism sector and provide new areas for further research.**

Keyword: Streaming,Real-Time Images, Mediation,Destination-Marketing,Real-Time Images, Destination Selection

I. INTRODUCTION

Tour mediation refers to an individual's active attempt to interpret the tour experience to another individual [1]. The emergence of new media using multimedia features has generated a new set of mediators for tourists' experiences. Reference [2], development of technology-based mediators including the Internet, mobile phones, and digital cameras are on the increase and influences consumer buying behaviour.

II. PROBLEM DEFINATION

During pre-visit, potential tourists are in a position to make travel decisions from organic images, induced images and real time images from a technology mediator. Tourists access real-time images using the technology mediator to authenticate destination attractions. With the knowledge derived from organic, induced and real-time images about selected and alternative destinations, travellers are in a better position to make informed decisions.

Technology- based mediation using real-time data streaming technique intends to address identified gaps, by providing real-time images to potential visitors on what they expect to experience at selected destination, for better decision-making. Preconceived images formed before visits to a destination may result in higher levels of destination reputation, customer satisfaction and destination loyalty [3].

The main objective of this paper is to find out the aims on streaming as a technology based mediator.

III. LITERATURE REVIEW

The Internet, as a new medium, mediates tourism at a more extended level because it provides interactive opportunities for the audience and the media [1]. Web 2.0 ICT are widely used by tourists during pre-visit to get information about tourism products and to share their tourism experiences during post-visit [4].

Reference [5], web 2.0 is a shared term for a group of web-based technologies that enable users to contribute to developing, rating, collaborating and distributing Internet content and customising Internet applications and some available tools include" blogs, wikis, Rich Site Summary (RSS) feeds, online video sharing such as YouTube, Google Video".

Streaming process as a mediation technique involves capturing media, encoding it to a streaming format before broadcasting through a streaming server, where a client sends a request to the server on a computer network, and the server delivers the data, which is interpreted by the client. Clients access the stream using web browsers such as Mozilla, Google Chrome and Internet Explorer.

The streaming component provides live experience on destination attractions to potential tourists to assist them to make informed travel decisions. The streaming component allows potential tourists to authenticate destination attractions and to perform emotional interpretations resulting from cognitive and affective components. With the knowledge derived from organic, induced and real time images about selected and alternative destinationsUnits

Implementation of such data streaming applications requires adoption of Service Oriented Architecture (SOA) where the client as a service accesses the application. This is an attractive approach for building large-scale real time data streaming applications. However, Maintaining Quality of Service (QoS) in such application is the main challenges hence the need to simulate service-based software to be able to determine performance and QoS of any systems [6].

Streaming over Internet protocol (IP) is highly affected by network bandwidth that varies. Moreover, there is always minimum server computing power to be able to implement multimedia applications. The client server-computing model provides the best approach for implementation of streaming applications [7].
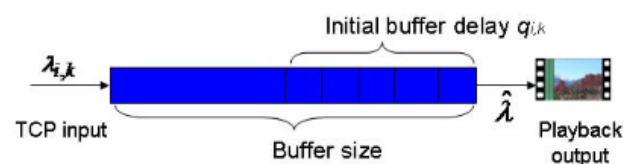

Fig. 1: TCP streaming model (Yan, Muhlbauer & Plattner, 2015:375)

Figure 1 above depicts data streaming model; streaming application consumes high-bandwidth and as a result requires load balancing for better performance on any network. During design such a system it is essential to implement chaining algorithm and buffer management techniques by allowing on demand streaming media to provide new data stream for any client request and wait until there is enough incoming data have been buffered [8].

IV. RESEARCH METHODOLOGY

To achieve the goals of this research, a design-science approach was adopted, and in particular a revised framework of Nunamaker's multi-methodological approach [9]. Design-science is a complement to the natural science approach and is particularly relevant for contemporary IS research since it helps researchers to determine the role of the IT artefact and its relevance in IS studies [10]

The prototype was evaluated using Delone and McLean's information system success model to determine its practicality and effectiveness. In order to evaluate a real-time data streaming technology mediator as an additional information source,

V. RESULTS AND DISCUSSIONS

The study sought to establish proposed aims of streaming technology: Kindly weigh the information sources contained in the new process (with real-time data streaming technique)

TABLE 1 Proposed aims of streaming technology

	Additional components of streaming technology	Mean	Std Deviation
1	Provide accurate information	4.1	0.01
2	Provide actual representation of tour destination	3.6	0.03
3	Helps potential customers to buy destination product	4.1	0.02
4	Provide real – time availability	4.2	0.04
5	Satisfy customer needs during pre-visit	4.7	0.05
6	Authenticate tour destination	4.2	0.04
7	Improve destination reputation to potential customers	3.6	0.01

From the findings in Table 1 above, the respondents agreed that the proposed aims of streaming technology provide accurate information and actual representation of tour destination. The streaming component also helps potential customers to buy destination product as shown by means above 4.0. Reference [11], real-time streaming technology allows travellers to perceive the current state of a destination.

The content of the images is of critical importance since it determines what kind of image the destination is attempting to create in the minds of potential consumers [12]. This study therefore infers that real-time streaming technology can be an accurate information source when making travel decisions because visual images appear to be more memorable and powerful in people's minds.

Image influences expectations, destination reputation and customer loyalty, and the more positive the preconceived image of a destination the higher level of loyalty to the

destination [12]. A unique and strong image is needed to capture travellers' attention.

Reference [13], online destination reputation is an essential component of destination competitiveness and online reputation is the media impressions created by consumer after a collective assessment of Tourism Created Content (TCC) and User Created Content (UCC) that is created and shared over the Internet.

The study sought to find out the aims on streaming technology. This study sought to find out aims on streaming technology as additional information source not in above list? The proposed aims on streaming technology suggested by the respondents were grouped into six distinct categories namely distribution, marketing, content, customers, stakeholders and management.

a) Facilitate the effective distribution and sale of a comprehensive range of tourism products from a destination,
b) Effectively co-ordinate the marketing activities and branding of a specific destination and the comprehensive range of products it has to offer,
c) Present the destination as a holistic entity displaying a destination orientation rather than product orientation,
d) Provide an appropriate and sustainable relationship building mechanisms with customers through effective, meaningful and continuous communication,
e) Build and maintain meaningful relationships with stakeholders,
f) Facilitate the management of a destination by supporting real time data streaming technique activities and through the provision of tools, support and training for its stakeholders.

The study sought to establish whether the portal provided pre-tour experience to online visitors.
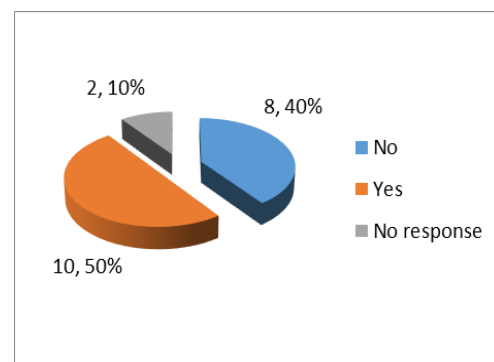

Fig.2: Response on pre-visit experience

From the findings in Fig 2, 50 % (n=10) of the respondents indicated that the portal provided pre-tour experience to online visitors, 40 %(n=8) indicated that it did not provide complete pre-tour experience due to lack of affective components, while 10 % (n=2) did not respond.

From a cognitive point of view, tourist destination image is assessed on a set of attributes that correspond to the

resources or attractions that a tourist destination has at its disposal. In the tourism context, those attractions are the elements of a destination that attract tourists, such as scenery to be seen, activities to take part in, and experiences to remember [14]. This study concludes that the portal provided the motivations and the magnetism necessary to persuade an individual to visit a determined place.

The study sought further sort to find out how useful the real-time images were as additional sources of information when making travel decision. The following question was posed: How useful are the real-time images as additional source of information when making travel decisions? The findings shows that majority n=13 (65%) of the respondents indicated that the real-time images are very useful information sources when making travel decisions, 20% (n=4) indicated useful and only15 % (n=3) indicated that it has some impact when making travel decision. From the findings, it is evident that real-time images on destination attractions provides access to realistic and imaginative tourist pre-visit experiences and provides mental pleasure to viewers by stimulating fantasies [2].

VI. CONCLUSION

The streaming technology provide accurate information and actual representation of tour destination. The streaming component also helps potential customers to buy destination product. Real-time streaming technology allows travellers to perceive the current state of a destination. The content of the images is of critical importance since it determines what kind of image the destination is attempting to create in the minds of potential consumers.

This study therefore infers that real-time streaming technology can be an accurate information source when making travel decisions because visual images appear to be more memorable and powerful in people's minds.

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