



# IDEALOGY

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# IDEALOGY JOURNAL

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**MUHAMAD ABDUL AZIZ AB GANI, ISHAK RAMLI  
MOHAMMAD HAFIZ YAHAYA, NURUL SHIMA TAHARUDDIN  
HASLINDA MD NAZRI, MUHAMMAD REDZA ROSMAN  
NIZAR NAZRIN**

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### INTRODUCTION

Idealogy Journal is a biannual journal, published by UiTM Press, Universiti Teknologi MARA, MALAYSIA. IDEALOGY is a combination of the words IDEA and LOGY whereby the word IDEA refers to any activity or action that can lead to change. On the other hand, the word LOGY refers to the understanding towards a certain group or thought, that is often related to the creation of the idea itself. So, IDEALOGY is a platform for those who have ideas to share in journal form. The IDEALOGY Journal is spearheaded by the Faculty of Art & Design, Universiti Teknologi MARA (Perak), however the scope and theme applied were broadened to cover Arts & Social Science. This journal is purely academic and peer reviewed (double-blind review) platform. It caters to original articles, review paper, artwork review and appreciation, exhibition review and appreciation, and book reviews on diverse topics relating to arts, design, and social science. This journal is intended to provide an avenue for researchers and academics from all persuasions and traditions to share and discuss differing views, new ideas, theories, research outcomes, and socio-cultural and socio-political issues that impact on the philosophical growth in the contemporary events.

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# Virtual Art Gallery Tour: Understanding the Curatorial Approach

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## ABSTRACT

*Virtual today is part of the new reality as the world starts to recognize its expediency. Virtual can branch out into multitudes of fields and usage with each one has its approach. Virtual tours in particular can be considered as one of the instruments capable of providing interactive elements in delivering mass access to information. The ease of accessibility is rather an opportunity than an option for anyone to explore. The purpose of this study is to understand the basic curatorial approach to organize a proper virtual gallery tour. Like its actual counterparts, the procedure is similar in many ways but with certain additional methodology. The research separates into three main curatorial stages mapping the actual gallery, constructing the virtual gallery, and publishing the tour. Each section discusses different methodologies which translate as a guideline to achieve that picture-perfect amalgamation. The research construes actual art exhibition as its plane of study to ensure that the evaluation is of the genuine result. The result is then assessed through its usability and accessibility for any interested individuals to practice. Conclusively, determine this research into providing a unification tool for any intuitional to organize their virtual gallery tour.*

**Keywords:** *Virtual tour, curatorial, approach, art gallery*



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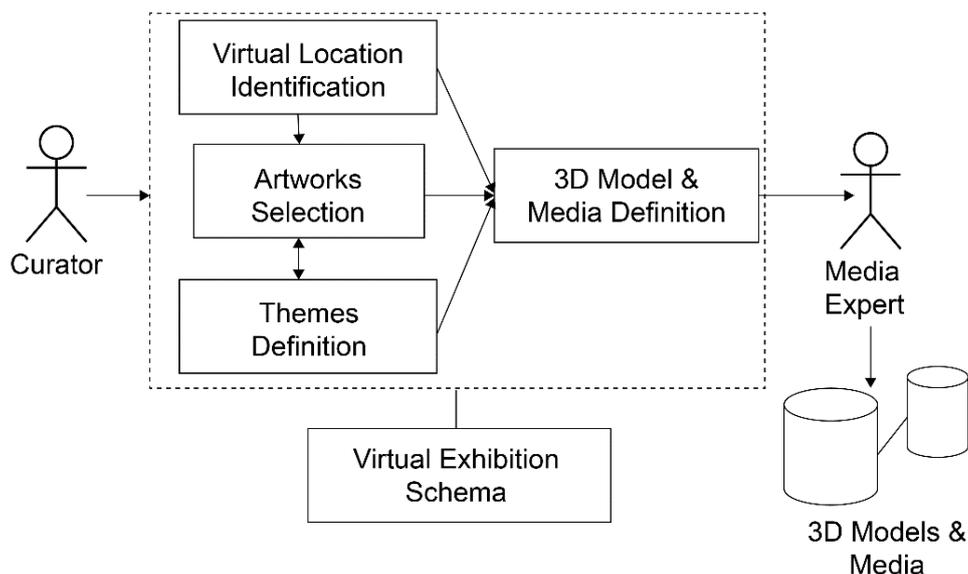
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## 1. INTRODUCTION

The implications of technology shown today prove that the world we know then is everchanging. Diaconu (2011) states that perception of innovation refers to technological solutions offered through using state-of-the-art knowledge. Through recent knowledge, discoveries, or trends; innovation can be utilized in a real-world situation. This opens up a wide range of opportunities by using those technological instruments to develop a concoction that could help consumers undergo their daily routines easier. One of the known technological triumphs is the usage of virtual spaces to spread mass access to information worldwide. Therefore, the world now is connected with these strands of virtuality that carries information, news, places, and more effortlessly to people around the world. According to Girvan (2018), virtual space is a simulated environment that is widely shared and interacted with among its inhabitants. This concept expresses that if a certain domain is built virtually regardless of its form, any interaction from its outer sources can be regarded as a user experience. For instance, a website is like an empty ground, once it is filled with seeds it will grow into a field, and this field supplies the crop for any passer-by to reap. This creates a digital watering hole for any users to gather their information; hence defining the virtual spaces.

The idea of utilizing these spaces into usable platforms is determined by the demands of the actual situation. The conversion from physicality into virtuality has great benefits for its application in many industries such as healthcare, recruitment, training, tourism, and education (Huang et al., 2016). Relooking at how it changes these industries, users are prone to using these commodities because the time required of absolving any issues had been greatly reduced. Consequently, a neighbouring industry that uses a similar concept could implement virtual in their vicinity by referring to the available options. This creates another domain for them to access that breaks the physical boundary. Addressing the situation, there was a lack of using a virtual solution in local art galleries that shares a similar concept with tourism. That similarity requires its visitors to traverse places and it would be a great addition if there are options that allow them not to. One of the solutions is by implementing a virtual tour that allows visitors to visit the gallery virtually. A virtual tour can provide navigation of the surroundings that exist in the real world (Li et al., 1999). The proposed notion is by no means to replace the traditional way people could enjoy art masterpieces but, it works as an alternate solution for those who could not harvest the time to visit one.

Conversion of physicality into virtual requires certain tools and software available in the digital market. Exploring one could be a hassle for those who have no prior experience. Therefore, this research's sole intention is to identify the basic methodology most suitable for an indoor art gallery tour and to comprehend the actual curatorial approach requires based on these several stages. 1) mapping of the exhibition and capturing its physicality. 2) converting the physical into virtual and constructing the tour. 3) publishing the tour and observing the statistics. Each stage will discuss a different methodology which includes the required tools, equipment, and software.



**Figure 1.** Steps for Virtual Exhibition Schema  
(Sources: Proceedings by Costagliola et al. 2002)

Based on the design schema (Figure 1), the steps of curating a virtual exhibition require one additional step which is a 3D model and defining the media. This stage necessitates a media expert as the person in charge. The problem with this is it nullifies the actuality of the exhibitions by altering the real environment into models. Therefore, this research will make slight arrangements to this design schema by eliminating the unnecessary experts and conceiving the curator itself as its sole proprietor. The rearrangement will be perceived as the defined curatorial approach that is much more suitable for reconstructing virtual art gallery tours without altering the exhibitions in any way.

## 2. LITERATURE REVIEW

Virtual tours (VTs) are by no means news to the world. Before this study, there is a plentiful of research made which discusses this matter. According to El-Said & Aziz (2022), VTs described as “a simulation of an existing location composed by sequences of video or images”. He suggested that the simulation consists of sequential images and videos attended by either textual descriptions, voice-over guides, or sound effects. The virtualised location and all of its additional elements were realised to redevising the actual site experience (Aguilera et al., 2014). The takeaways here are discussing the tools to capture, construct, and publish. As shown by photogrammetry work by Koutsoudis et al. (2007), VTs can also be experienced through URL shares on the web that allows visitors to interactively experiences the tour from the screen of their computer or mobile devices. Although, VTs could also be conducted through advanced technologies such as using Virtual Reality (VR) hardware (Barbieri et al., 2017). This proves that VTs are only as limited as to their available technologies and platforms.

Currently, there are abundant of VTs that can be accessed freely as we speak. VTs across multiple disciplinary borders that range from galleries, museums, hotels, real estate, showrooms, and even public streets. For instance, the National Museum of Modern and Contemporary Art, Korea uses Google Arts & Culture to take viewers around their whole museum from outdoor to indoor space. The system uses VTs as its means of accessing information. Moreover, users can even traverse the streets through their smartphones with Google Street View (GSV) app. GSV is a free observatory system that allows anyone to share their captured 360 photos worldwide (Curtis et al., 2013). Meaning, that it adds the value of personal distribution to be shared with other users across the continent. Furthermore, some companies even provide VTs as a business opportunity through their profound aptitude for marketing services in the real estate industry at a certain amount of price such as Matterport (Sulaiman et al., 2020).

In Malaysia, our community also joins in the ride as shown through Jane Rai’s virtual heritage walk dub as Old Kuala Lumpur East-West Connection (Puvaneswary, 2021). The VTs take locals on a journey of old mining settlements that converge between two rivers in Kuala Lumpur. Likewise, some known galleries even took the opportunity of using the real estate VTs service to virtualise their location. Namely labelled as ‘40 Years of Yusof Ghani’, the VTs had mapped TAPAK Gallery using Plush Global Media that allowing previous visitors or newcomers alike to venture the premises virtually (Amir et al., 2021). With so many businesses, institutional, private sector, or even personal usage of VTs, it is safe to say that the options to construct one are rather possible.

## 3. METHODOLOGY

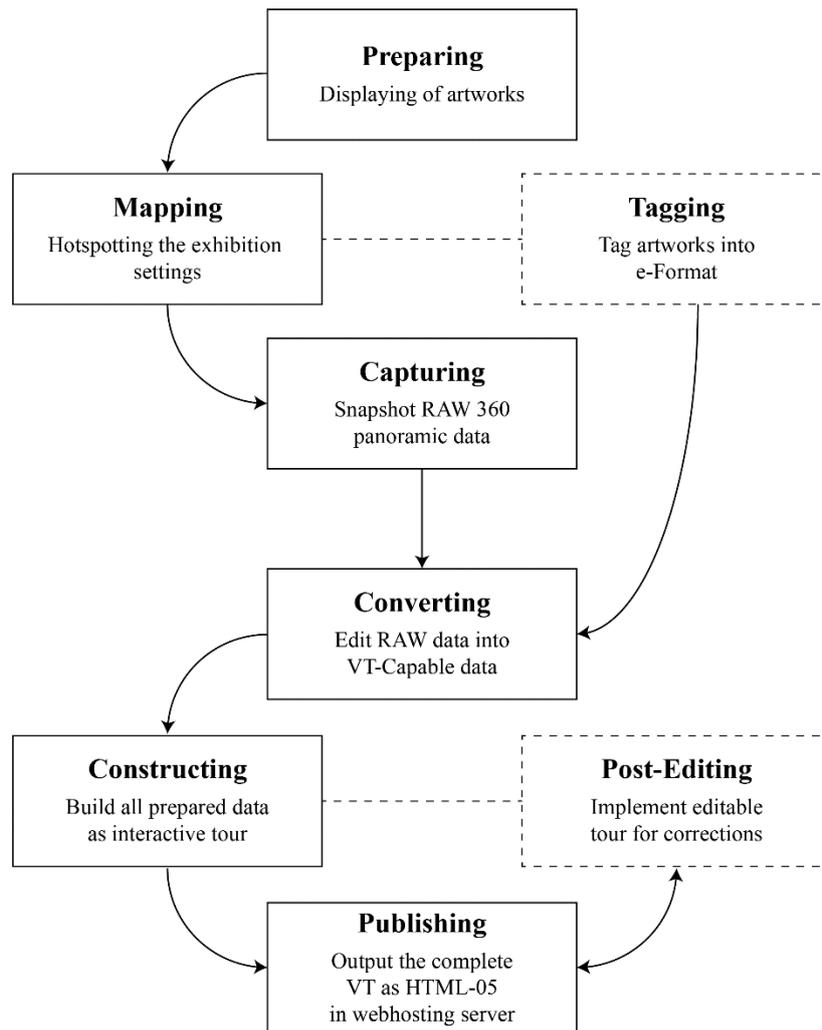
The methodology required for this particular research is an experiment that needs to be conducted in an actual field. Therefore, the most suitable methodology to be used for this research is the experimental approach, specifically, Lab Experiment. Lab Experiments conducted in a well-controlled environment – not necessarily a laboratory, due to its accurateness and objective measurements are possible (McLeod, S.A. 2017). In order to understand the curatorial approach when dealing with an actual art gallery tour, the researcher focuses on site-specific events. The events of the International Art Connoisseurship Colloquium (IACC) conjoined two countries into one large-scale art exhibition. This provides all the necessities required for the research to be held. By conducting the experiment on a real event, it is easier for the researcher to identify the requirements in terms of preparing, mapping, capturing, converting, constructing, and publishing the VTs.

In detail, preparing defines as displaying selected artworks in the actual gallery. Mapping means identifying suitable spots in the gallery to be remapped into virtual. Capturing translates as using a piece of suitable equipment to create 360 panoramic images. Converting is to finalize the VT-capable images

through a series of editing as a pre-requisite for the intended software. Constructing means implementing all the finalized data (images, videos, sounds, etc.) as one interactive virtual tour. Lastly, publishing is to output the completed VTs as HTML-05 that are capable to be accessed by users on the world wide web. The process has to be done neatly in the suggested sequence in order to identify and absolves any issues along the way.

### 3.1 Conceptual Research Framework

To conduct this research properly, a conceptual research framework had been constructed as a flowchart. The chart is derived from the methodology as a procedural sequence to answer each process of the research.



**Figure 2.** Art gallery virtual tour research framework flowchart  
(Sources: Authors' composition)

Figure 2 above shows the research framework flowchart for creating a virtual tour of an art gallery. Each framework refers to a certain task. These tasks will later identify the tools and software required to determine the utmost practical approach.

## 4. ANALYSIS & FINDINGS

The findings for each phase are separated into three sections, which are 1) the activity, 2) the approach, and 3) the requirements. The result is explained in tabulate form for readers to easily interpret in their understanding.

### 4.1 Phase 1: Preparing, Mapping and Tagging

As explained before, phase 1 of creating the virtual gallery tour is the necessary preparation that involves a similar approach to curating actual art exhibitions. The results are discussed below.

**Table 1.** Preparing (Source: Authors' arrangement)

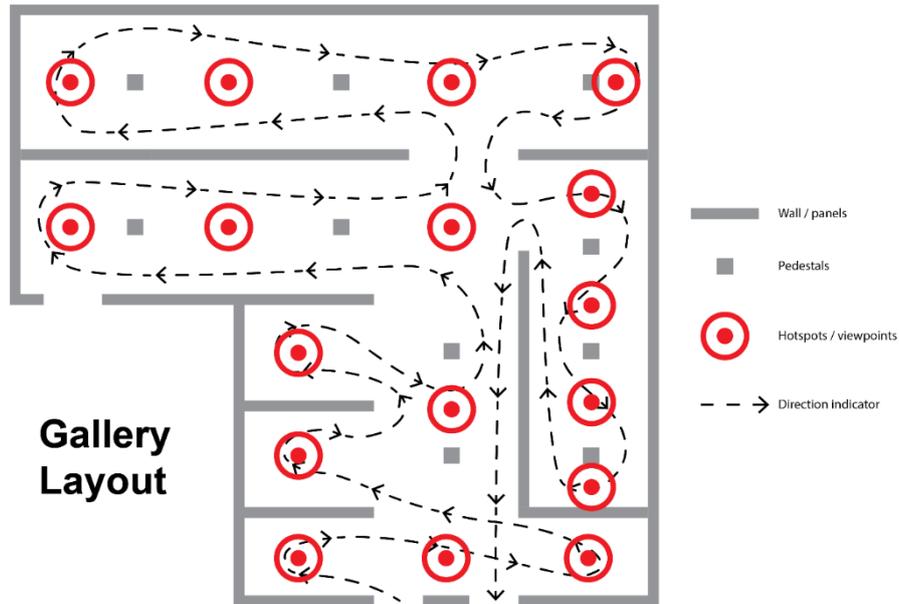
The Activity	The Approach	The Requirements
Placement of display panels and pedestals. Artworks is then organized and hanged accordingly.	Each artwork is displayed according to suitability of the settings. Mostly depending on the size, format and theme (if available).	Display wall / panels (2D artworks), pedestals (3D table sculptures). Necessary tools and equipment.

Referring to the table above (Table 1), it can be safely said that the process involved is a reflection of the usual curatorial approach of any art exhibition which had been practiced before. Therefore, the approach for this phase has no changes as the prior already-fit its needs.

**Table 2.** Mapping (Source: Authors' arrangement)

The Activity	The Approach	The Requirements
Placing hotspots in the gallery ground which covers the whole viewpoints.	Hotspots is translated into viewpoints in virtual tour. The hotspots placed need to ensure that each artwork can be viewed clearly with direction indicator.	Hotspotting tapes (any suitable tapes), Direction indicator (arrow marker).

The table above (Table 2) shows a mapping stage of the first phase. This process has no specific explanation but the curator needs to ensure that each hotspot covers each viewpoint. This is because when transferred into virtual, the view is not as defined as its actual counterparts. To make this analysis easier to understand, an illustration has been organized to be observed below.



**Figure 3.** Gallery Layout Mapping (Source: Authors' arrangement)

The figure above (Figure 3), shows the gallery layout mapping that was arranged by the curator to use as a reference. These layouts will be transferred into virtual using software in later phases.

**Table 3.** Tagging (Source: Authors' arrangement)

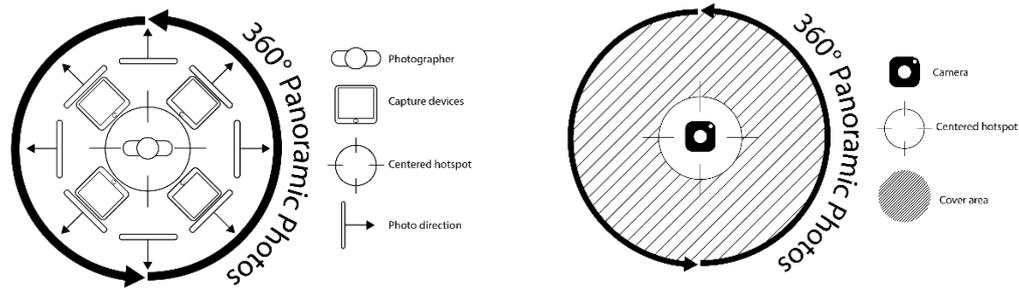
The Activity	The Approach	The Requirements
Tag every artwork in e-Format in sequential order.	Tagging is basically to take each artworks description and pictures as e-Format (documents, videos or images). The data will be used later in stage 3.	Words software (artwork description), Photographs / scanner (2D / 3D artworks)

There is no specified approach to this (refer to Table 3). This stage is similar to making an e-catalogue or catalogue for printing. However, the data collected is to be composed differently depending on the virtual tour themes and design.

**Table 4.** Capturing (Source: Authors' arrangement)

The Activity	The Approach	The Requirements
Take a surrounding snapshot of the placed hotspots using proper equipment.	Capturing the snapshot require the photos to be taken on top of the placed hotspots. The photos taken requires proper equipment, tool or app because it has to be in a 360 panoramic format.	360 camera or Google Street View (GSV) app (Tablet or smartphones)

In this stage (Table 4), the curator requires proper equipment, tool, or app to be utilized. Since this stage is an additional curatorial approach that works as inbetweeners, a prior understanding of taking 360 photos needs to be identified beforehand. The illustration below can assist in elucidating this matter.



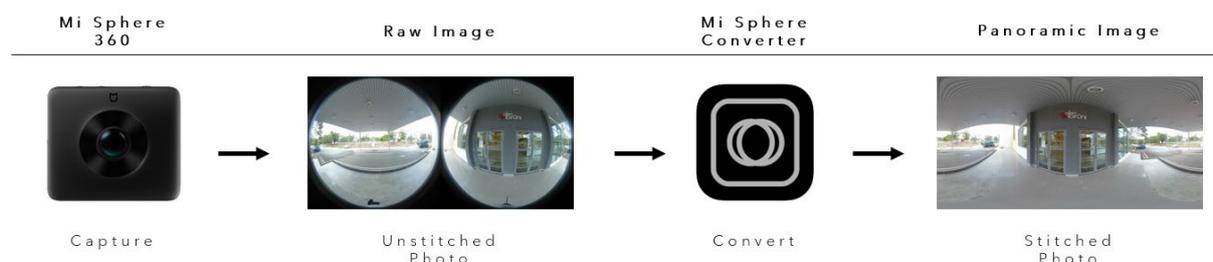
**Figure 4.** Illustration of capturing 360 RAW photos using 360 camera and GSV app using tablet. (Source: Amir et al., 2021, Copyright Consent: Permissible to Publish)

The figure above (Figure 4), shows an illustration of two pieces of equipment used in capturing 360 RAW photos. Only one option of equipment is required to capture as both can provide the necessary needs. The device used is either using 360 camera or tablet/smartphone, however, there are several pros and cons to be taken here.

**Table 5.** Pros and cons in using 360 camera and tablet/smartphone (Source: Authors' arrangement)

Device	Pros	Cons
Tablet/Smartphone through GSV app	<ul style="list-style-type: none"> <li>• Cost efficient</li> <li>• Availability</li> <li>• User-friendly</li> <li>• Ready-to-use 360 photos</li> </ul>	<ul style="list-style-type: none"> <li>• Less quality output</li> <li>• Inconsistent</li> <li>• Photo-taking can be time consuming</li> <li>• No option for video</li> </ul>
360 Camera	<ul style="list-style-type: none"> <li>• High quality output (2K to 8K)</li> <li>• Instant photo-taking</li> <li>• Portability</li> <li>• Video capability</li> </ul>	<ul style="list-style-type: none"> <li>• Expensive</li> <li>• Requires unnecessary accessories / software</li> </ul>

As referred to in the table (Table 6) above, these stages are intended to convert and edit the captured data into outputs that are readable and manageable by the VT-Software. This stage can be considered as a pre-prep before the final phase of constructing the VT.



**Figure 5.** Converting process of RAW data (Source: Authors' arrangement)

The figure above (Figure 5), shows the converting process. It is shown that the output by the 360 cameras (Mi Sphere 360) is unstitched. Therefore, through using a converter software (Mi Sphere Converter) and slight edits on the colour, the outcome is stitched photos that are VT-Capable. A different camera might have different outputs, however, on this specific field test, it is required to be converted using the implemented software that came along with it.

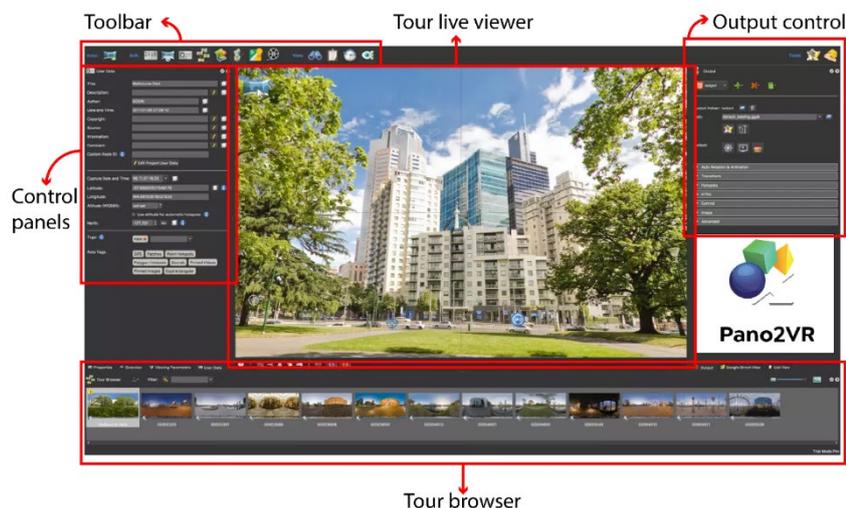
### 4.3 Phase 3: Constructing, Publishing and Post-Editing

Phase 3 involves three stages which are constructing, publishing, and post-editing. This stage is a completely new approach to conventional curatorship. This marks the steps in building one’s virtual tour as it takes on new depths of software utilization. In this process, the researcher had identified the most suitable software as the market for it is entirely saturated.

**Table 7.** Constructing (Source: Authors’ arrangement)

The Activity	The Approach	The Requirements
Constructing the virtual tours using the selected software	Each software has different customization, so, selecting one that fits the needs of the curatorial approach need to be done beforehand.	VTs software

Based on Table 7, this is the first stage of the final phase in creating a VT. In this stage, virtual spaces are completely been dealt with. The process is straightforward but, selecting the right software priority before building a tour. This is because different software provides different customization. For this particular field test, the researcher chose Pano2Vr as the software of choice due to several reasons.



**Figure 5.** Pano2Vr Interface (Source: Authors’ screenshot of the software)

Conferring to the figure above (Figure 5), the Pano2Vr interface has several sections; toolbar, tour live browser, output control, control panels, and tour browser. The toolbar consists of various menus like input, edits, and views. Control panels hold all the settings similar to properties. Tour live browser shows every node contains in the tour. Tour live viewer display current node in 360 interactive views. Lastly, output control exports the project to be published in the format that we chose. Due to this, Pano2Vr is suitable because its interface is comprehensible and the customization is plenteous.

Guidelines to use the tour are also supplied within the software, thus, the process would not be a hassle for any new users.

**Table 8.** Publishing (Source: Authors' arrangement)

<b>The Activity</b>	<b>The Approach</b>	<b>The Requirements</b>
Export the tour in HTML-05 format. Publish the HTML-05 in web hosting server.	This approach depends on 1) the software, 2) the server. Some software uses their own webhosting server; thus, exporting is unnecessary. If the service is not available, self-web hosting server to be ready.	Web hosting domain (free or paid)

The table above (Table 8), concludes phase 3 with the publishing stage. At this stage, the tour is ready and running. However, to ensure that it can be accessed by visitors, it needs to be operated within a web hosting server. Some servers required certain charges; others are free. Depending on the availability, the export HTML-05 folder usually reads the tour when it's published into a domain. Hence, the tour can be accessed freely through shared links or URLs.

After the VTs are up and running, the curator will be held responsible to monitor any errors or post-editing necessities. Therefore, it is recommended to make sure that the tour has that post-editing capability implemented. Post-editing is not an essential procedure, but it is more of a continuous upkeep solution. Nonetheless, it is important to have those options in case errors are deemed to occur.

## **5. CONCLUSION**

In the hindsight, virtual art gallery tours are alternate ways to promote art exhibitions to new waters, it is by no means to replace the conventional visits. This curatorial approach is an addition that expands the curatorship of the usual art gallery. Based on the field test, the researcher who is also the curator has organized the uttermost basic implementation of utilizing VTs. The results are based on the available resources during that time. Hence, improvements are nevertheless conceivable. In conclusion, to understand the curatorial approach; the researcher has engaged with an actual field test to achieve these results. Hence, the curatorial approach for VTs is listed orderly based on trial and error.

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## CONFLICT OF INTEREST

There are no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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