

# Augmented Authenticity

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## Abstract

How do you create an authentic digital space for "visitors" to interact with industrial heritage? The objective of this poster is to explore several different paths to create this "authentic" cultural space that is entirely virtual for use in industrial heritage. The idea is not to create exact replicas of an industrial site that attempts to trick a person into thinking they are there in real life, but to find various ways to digitally interact and explore industrial heritage. The goal is to create a unique experience that combines education outreach with unique opportunities so that the "visitor" not only comes out with a better understanding of the industrial site, but with an "authentic" experience that could only happen using a digital platform.

## High-Grade vs Mid-Grade Devices Does the Difference Matter?



There is an obvious difference between the Faro on the right and the Matterport on the left. Some of those differences are the accuracy of the recording the distance that can be recorded, the technical know how to use (Matterport: push button on phone app and get out of the way; Faro: much more tech knowhow is needed), and the most obvious difference is the price. The Matterport goes for around \$3,500 while the Faro is \$25,000 plus thousands for the correct accessories. Does the quality difference matter enough to the people visiting the digital space?

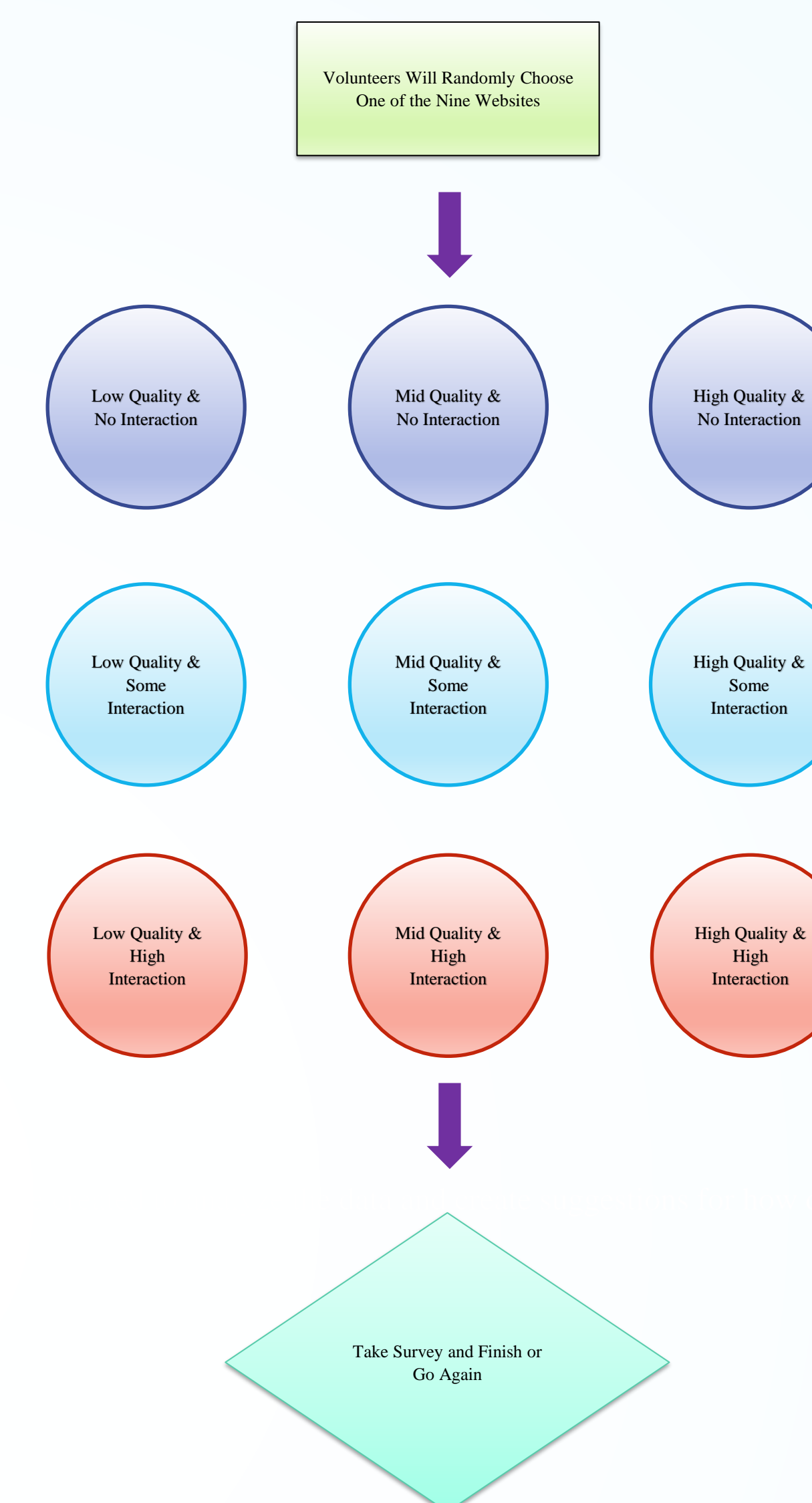
## Introduction

The purpose of this study is to take the first step in identifying what aspects are needed to create an authentic digital space for industrial heritage. The term I am using to for this authentic digital space is augmented authenticity. The term augmented authenticity will examine from the visitors perspective what it means for a virtual site to be considered authentic. This study will examine augmented authenticity in two ways: digital quality and interactivity. The first aspect of augmented authenticity, digital quality, will look at the difference between the quality of the data being provided and how much it matters. In essence, the question being asked is, at what point does the visitor feel that the digital quality being displayed hinders the authenticity of the site? Does it matter to the people visiting the site that the virtual environment is of the highest quality? If not, when does it start to matter, if at all? Is a high end \$25,000 scanner really going to help digital industrial heritage education outreach best, or will the low tech alternatives be better due to usability and cost?

The second aspect of augmented authenticity is the ability to interact with the virtual environment. Does it matter to the visitors that all they get to do is scroll through the website and look and read or does interacting with the virtual environment create a positive, neutral, or negative effect. In essence does interacting with the site make it more authentic and if so, when is it too much?

After all the case studies are completed, and the information is gathered. The results will be displayed, and a findings and discussions section will be created to analyze the data and create suggestions for how digital industrial heritage can best be implemented to better connect to the public.

## Methodology



This case study will be done by creating a digital tour for the Western Museum of Mining & Industry. The tour will have three different levels of digital quality, to compare against. The display will also have three different levels of interactivity: no interactivity, moderate activity, and high interactivity. This means there will be a total of nine different digital tours. The volunteer will be given the opportunity to interact with the digital displays, and afterwards take a survey questioning what they thought of the different displays. People will be allowed, encouraged even, to take the tour more than once.

The case study will be made available at several different venues one will be on display at the Western Museum of Mining & Industry. An online venue will be made available so that people will be able to participate in the case study online, as well. Several other locations are planned but due to current COVID-19 restrictions this may not be possible and may have to switch to advertising the study at online events such as virtual conferences.

The survey will be made available online for a three-month period to allow for a maximum number of people to participate in the study. The idea is to identify and gain information from different locations where people already have a budding interest in industrial heritage, or at the very least, an interest in history.

By surveying this group of people for the study, a target audience that is already willing to spend time on similar endeavors is taken into serious consideration. The information gathered will be used to determine if people found one set of the virtual tours more enjoyable than another and if so, did everyone tend to agree on which one was the most enjoyable, or was there demographic variability.

## Future Goals

Though this study has yet to be conducted the plan is to take the information gleaned from this study to better understand what it is that visitors to digital industrial sites find to be valuable, and what they find to be inconsequential. By gaining insight into the visitor's perspective an important foundation can be created to develop a digital environment where a visitor can have an authentic experience. Using this foundation and information gathered from other studies a guidebook will be created that helps museums and heritage sites better traverse what it is they need to do to create a digital environment.

## Conclusion

In the end, the idea is not to dismiss technology, but to better understand its place in creating a digital learning environment. Technology should be looked at merely as a tool to be used, a platform in which to best connect the visitor to the museum or heritage site. Technology should not be something that overshadows the value of the museum, object, or site that is on digital display. By better understanding what it is that the visitors find value in, museums and heritage sites can better plan for the future, and hopefully find new and unique ways to connect people to the past in ways they could only once be hoped for.

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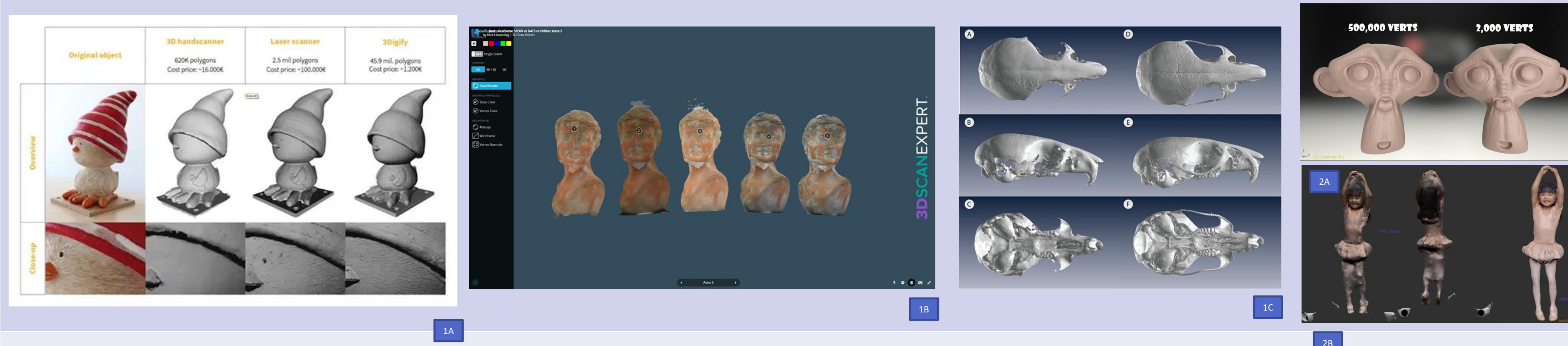
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The poster template used for this presentation is from makesings.com

## High-Grade vs Mid-Grade Devices Does the Difference Matter?



Today you can find many side by side comparisons of 3D digital scanning. These comparisons usually do a great job of showing you the obvious quality difference between the different types of scanners. Some examples of these cross comparisons can be seen in the three images on the left (1A, 1B, 1C). The cross comparisons are accurate, the cheaper scanners quality does not compete with the recording quality of the higher end scanning equipment. The catch is that the quality difference is becoming a moot point, an example of this can be seen in image 2A. One monkey face has 250 times less vertices on it than the other, but the quality difference is barely noticeable. Another instance where high quality scanners usually do better is at filling in holes or removing unwanted glitch's during the scanning phase. This again has become less of a problem as software programs such as Blender have made 3D image repair much easier and affordable. You can see a good example of how a software program (Blender), has repaired the scanning shortcomings of a lower quality scan in image 2B.



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