



Malloca VR

User Testing Guide

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A detailed Guide for User Research for Malloci WebVR

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Introduction

Virtual Reality(VR) refers to a simulated environment created by the use of computer technology. VR technology has grown over time in leaps and bounds and In recent times has been applied in the most incredible ways. However, one area that is still lacking is the ease of development of VR content as it requires a very niche skill thereby affecting the reach and usability of VR technology.

Malloci was developed with this problem in mind and has been tailored to meet the need for VR content development for people who lack the skill. With Malloci, VR content creation is as easy as writing a blog post using tools and syntax that most people are familiar with. It uses markdown syntax which is universal and widely understood, reducing the need for prerequisite knowledge

Additionally, Malloci also uses Natural Language Processing and information visualization techniques to generate WebVR content from traditional web content like Wikipedia articles, making it even easier to generate WebVR content at the click of a button.

Research Aim and Objective

The purpose of this carrying out user research is to observe user behaviour while interacting with Malloci. During this research, we seek to understand user behaviour and observe reactions such as eye movement, navigation text readability and interpretability with the aim of uncovering areas of difficulty or underperformance of the tool. Usability testing will be carried out for different aspects of the tool, observing how well users are able to create, upload and render WebVR content using this tool, with as minimal supervision as possible. Since the singular criteria for the use of Malloci is simply an interest in or curiosity about VR content, irrespective of prior experience, these series of tests will provide a sense of how well users can understand the tool with whatever level of experience they have.

Another goal for testing is adaptability. The environment should be adaptable to most kinds of VR headsets ranging from a basic cardboard headset to a sophisticated headset such as the Samsung VR or the Oculus. Also, users should be

able to render content using web browsers and smartphones with certain specifications and this test will involve consistency checks across these devices.

The aspects which will be tested during this research are

- Effectiveness
- Satisfaction
- Intuitiveness
- Efficiency

User satisfaction is an emotional aspect of user experience which will also be tested during this research using pre and post surveys. Though effectiveness and efficiency are important, it is also necessary to ensure that users leave with a positive feeling about the platform. That way, they are likely to return which is, of course, the desired outcome.



Fig1. Types of VR headsets (yourstory.com)

This test guide highlights guidelines to follow while conducting research for WebVR content. This guide is intended to be generalizable across different VR platforms with some tweaks where necessary. The entire process from participant recruitment to testing, analysis and presentation of results are highlighted in this test guide.

One importance of creating this test guide is to ensure uniformity with reproducibility across as many iterations as may be necessary.

Research Question / Hypothesis

It is important to begin with a research question or some form of hypotheses which would guide the entire research process. The overall research question that will be considered in this case is: “**Are users able to efficiently and intuitively interact with the interface irrespective of their level of experience with VR technology?**”. This question is important because it directly addressed the major reason why this tool was developed.

Due to the different aspects that will be considered during this research, the above question will further be broken down into sub-questions.

- Are users able to access the VR environment using the specified devices for the test?
- Are users able to intuitively navigate the space using the specified tools?
- Are users able to understand and efficiently use the markdown tool to create exhibits with minimal supervision?
- Do users experience a general sense of satisfaction after using this tool?

Research Design

In this research, both qualitative and quantitative methods of data collection will be used to test user behaviour across different aspects. This data will then be analysed and used to draw inference about the user, their experience and the effectiveness of the tool. As a first step we will define our user groups

User Groups

The singular criteria for participation in this test is an interest in designing WebVR environments whether the user is an expert or a novice. However, users will be categorized based on level of expertise and separately to ensure that while the tool is useful to those with minimal understanding of WebVR, it is also appealing to experienced users.

A recruitment Screener will be passed out, detailing the questions that interested participants will be expected to answer prior to the tests to gauge things like familiarity with different technologies, interest in VR, general opinion about VR technology e.t.c. Based on the responses to these questions, users will be categorized

Based on the response to the screener (see Appendix), participants will be divided into categories, Each category as well as a brief description of each is tabled below.

User Group	Description
Group A	“I am simply curious about VR technology but not very much in VR content creation”
Group B	“I have little experience with VR and an interest in creating VR content but I have never tried /do not know how to”
Group C	“I have some experience with VR content development”

Research Methods and Logistics

Consent and Confidentiality Agreement

Before the testing process begins, each user would be made to sign a confidentiality agreement and a consent form informing them about the personal information which may be collected during the test and also about their privacy options. Going by Vetenskapsrådet’s recommendations (1990),the requirements for obtaining consent are:

- Ensure that the participant is informed of the purpose of the research
- Ensure that the participant understands that participation is voluntary
- Ensure that participant is aware of their privacy options and given choices where possible
- Ensure that participants are aware of how the data collected will be used.

The methods which will be used for this research are outlined below

Heuristic evaluation

For this evaluation, the users will be individually assigned a specific set of tasks to perform using the provided tools. The main goal of this method is to detect usability problems from the users perspective. This could also further inform the goals for other methods. Also the it gives both the user and the facilitator an opportunity to become familiar with

- Users ability and level of understanding
- Difficulties which users are likely to encounter during the usability test and how best to prepare for it. Note that the difficulties which may show up during the

usability test could be completely different from those observed during the heuristic evaluation.

- Each other (acts as an ice-breaker)

Nielsen's 10 Usability heuristics (Nielsen, 1995) will be used as a guide to determine the nature of tasks assigned.

Problems identified during this phase of testing will be compiled as a list, sorted by level of severity and will be used to inform other methods of testing.

Usability test

Usability test is similar to the heuristic evaluation method as they both involve a set of tasks being assigned to the user. However heuristic evaluation will be used to get a general understanding of the difficulties that users can encounter, usability testing will be designed to be more in-depth and targeted to certain aspects of the tool. The tasks assigned will be more complex compared to those assigned during the earlier method. Depending on the number of participants, this test will either be structured as either a qualitative test or both quantitative and qualitative test. According to a study by Nielsen and Landauer (1993), the optimal amount of participants required to be able to discover all usability problems is 15 while a study by Nielsen (2000) shows that a usability test with 5 users will lead to a discovery of about 85% of usability problems. This method will be designed as scenario-based with a think-aloud method of feedback from the user.

Quantitative metrics which can be used for evaluation of usability tests are:

- Completion rate
- Efficiency or Time to task completion
- Completion time at first attempt
- Number of errors
- Frequency of errors
- Severity of errors
- Satisfaction Rate

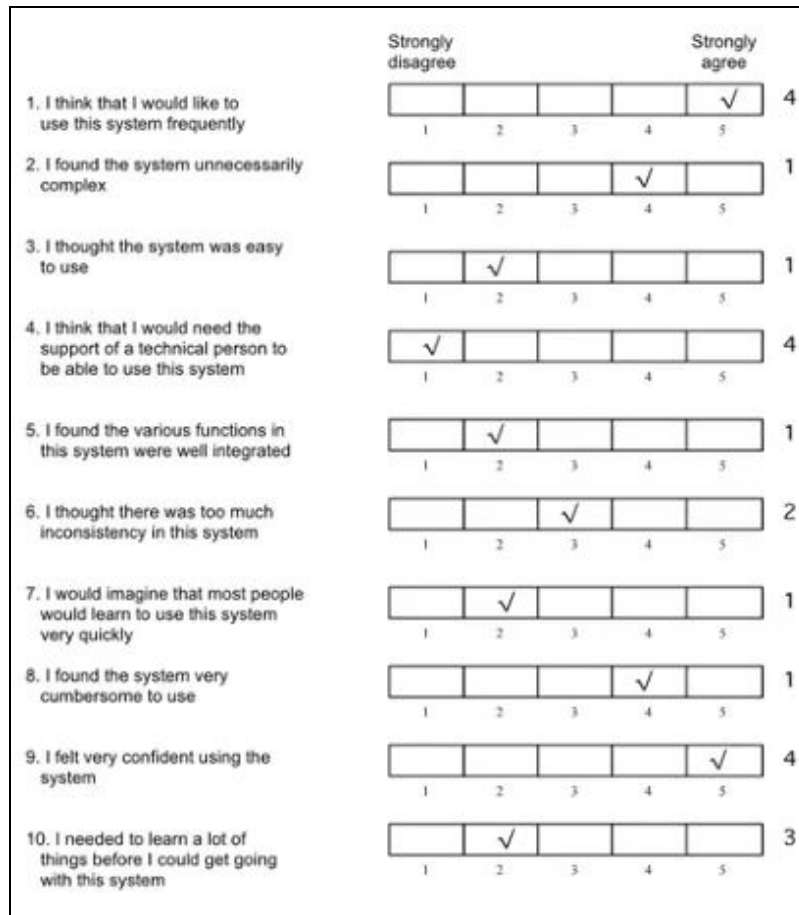


Fig 3. Example of a system usability scale used to measure user satisfaction

These measurements are to be calculated for all users and then averaged overall. For average completion time at first attempt, it is recommended to use geometric mean as opposed to mean to account for skew based on user skill or ability. If necessary, this test will also be used to compare usability across different versions of the tool using the same task-based method.

Surveys

Surveys can be used as an alternative to observational methods to uncover patterns in behavior, user preferences especially for a larger number of participants. Surveys could also be used to collect both qualitative and quantitative data. Surveys can be used to determine the true state of mind of the user as they may feel uncomfortable voicing out negative opinions.

It is recommended that surveys are kept short and simple, specifically between 5 and 10 minutes (Unger & Chandler, 2012). If the survey needs to be longer, then it should be incentivized. For larger participant size, it is important to administer this method using a digital system for easier data compilation.

The advantage of surveys is that it can be used to collect both qualitative and quantitative data and also to collect numerous responses from a lot more users than any of the other research methods. Surveys can also be used to target specific user groups.

Interviews

The interview is meant to be used in support of the usability testing method and can be made optional. Users may also opt in or out of the interview using question 10 of the screener. Interviews are not mandatory as other forms of research have been designed to give sufficient insight. As an alternative, the recruitment screener can be slightly extended to cover salient questions that may be deemed important. However this is only advised if participation is incentivized, as a longer screener may be a put-off.

Tests Duration Recommendations

Depending on the number of users, different users can be assigned to different tasks. However for all the above methods, it is essential to use the time optimally to prevent the participant from losing focus and becoming bored which may lead to a haphazard handling of tasks. It is recommended to keep the entire tests below 2 hours for each user (Hartson & Pyla, 2012). The table below outlines a recommended number of hours/minutes for each method and should be allocated to comply with the 2-hour guideline

Research Method	Recommended duration
Heuristic Evaluation	<= 30 minutes
Usability testing	< = 1 hours
Surveys	<= 10 minutes
Interviews (pre and post)	<= 1 hour

Compensation

Besides the survey, all other research methods outlined so far will require in-person participation, this means that users will need to create time out of their schedules to participate. Lack of compensation for time and contribution might be a deterrent, therefore it is necessary to make plans around this. The research methods outlined here are non-experimental and outcome is not really dependent on the user's personal opinion but more on level of skill, therefore the risks of participant results being swayed by compensation is quite low.

Research Tools

The tools which will be used during this research are listed below. Participants will be expected to bring their own phones. All other tools for the test will be provided

1. Head-mounted display device
 - a. Digital headset (e.g Oculus)
 - b. Cardboard headset
2. Windows Laptop with Google Chrome web browser
3. Mac with Google Chrome web browser
4. Ipad (optional)
5. Phones
 - a. Android
 - b. Iphone

Research Procedure

This section will propose methods of execution for each research method outlined above. These procedures are not set in stone and are merely required to serve a guide. They may be altered to fit peculiar testing conditions.

Heuristic Evaluation Procedure

This is the first method discussed in this guide. As earlier states, timing for tests under this method should be restricted to 30 minutes. Tests should be straightforward and uncomplicated. As a first step, inspection questions are to be created for the user. Using Nielsen's 10 usability heuristics(1995) questions have been derived which would serve as guidelines for inspection/observation for each task assigned to the user. Users will be assigned tasks based on categorization earlier indicated. Examples of tasks for heuristic evaluation are included in the Appendix section of this guide.

	Neilsen's Usability Heuristic	Derived Questions
1	Visibility of system status	Is the user sufficiently informed about what is going on at all times while using Mallocci?
2	Match between system and the real world	Does information provided seem logical and understandable to the user? Can they approach each task using adaptable real-world knowledge?
3	User control and freedom	Can users take action, undo action, exit a particular "state", navigate away

		from a page without feeling overwhelmed with the process required to do so? Are the exit signs clearly indicated?
4	Consistency and standards	Are instructions within the system interpretable to the user and consistent by general standards?
5	Error prevention	Are there errors that were made that could be prevented by clearer instructions or an alternate design?
6	Recognition rather than recall	Is reduced cognitive load optimized for? Are instructions accessible at every step of the way?
7	Flexibility and efficiency of use	Does the system effectively cater to both experienced and inexperienced users?
8	Aesthetic and minimalist design	Is relevant information provided in a way that is easy for the user to follow?
9	Help users recognize, diagnose, and recover from errors	When users make errors, are they able to diagnose and rectify the errors?
10	Help and documentation	Is documentation easily searchable?

Interview and Usability Test Procedure

Interviews can be combined with usability tests for each participant session where necessary. The aim of these methods should be to collect higher quality data than the heuristic evaluation method. The recruitment screener serves as preliminary interview questions but can be asked again by the evaluator if certain answers provided by the user are not clear.

If a recruitment screener is not used then the below guidelines can be used to formulate interview questions

1. The first part of the interview should inquire about users previous knowledge of VR and experience using Markdown systems. This should aim to research their behaviour, understand their goals and opinions e.g what they typically use VR for. What scenarios they have used Markdown syntax previously (if applicable)
2. The second part of the interview should aim to understand past user experience with VR in specific ways. E.g. Eye tracking VR systems, remote controlled VR systems. Openness to certain features in VR

Proposed interview questions are tailored to each user group and can be found in the Appendix section of this document

For the usability test, the main goal should be that the users are able to perform specific tasks with little supervision while thinking aloud through the steps. In this step both quantitative and qualitative measurements would be taken. Recalling that the aim of the entire user testing process is to ensure that Mallocci can be understood and used irrespective of prior experience with VR. This set of tests will not be broken down into user categories like the other methods. The user should be sufficiently informed about the think-aloud method. For first time users of the headset, they should be informed of the possibility of simulation sickness and the necessary action to take if that occurs. After the test, some follow up questions should be asked to get a general overview of the users opinion. The usability scale in *Fig3*. can also be used instead or in addition if there is interest in recording both qualitative and quantitative responses to the post-usability test questions.

Tasks to be assigned for usability testing and the post-test questions are contained in the appendix section of this report.

Survey Procedure

As earlier mentioned the survey should be used as an alternative to observational methods and should not take the user more than 5 to 10 minutes. Using this method, a lot of responses can be collected even without any compensation.

During this procedure, participants are to be briefed on the purpose of the survey, the data that will be collected, what it will be used for and how. The questions should be of different times e.g short paragraph answers, likert or rating scale, ranking choices, multiple choice e.t.c.

The survey should be used to understand things like frequency of use, importance of functionality,

Details on the survey questions are included in the appendix section of this report

Results Analysis and Reporting

Analysis of qualitative results in general should be need-based and can be used to provide a descriptive summary of user experience at each testing phase.

Heuristic Evaluation Analysis

The outcome of this test should be a list of usability problems observed by the evaluator. The list could be ranked in order of severity from low to high determined by

how many times in total each problem occurred. Where possible, they should be tied back to the Nielsen's heuristic which they fall under.

A typical analysis for a usability problem identified during this procedure should be reported as follows:

Usability Problem	Description
Users unable to render gallery item in VR	This problem occurred with high severity and is due to the lack of visibility of the icon required to perform this task. This problem occurred in 5 out of 7 users and relates to number 1 and 4 of Nielsen's (1995) usability heuristics.

Interview Analysis

To recall, the process of this procedure was to understand the behavior of users with respect to VR systems in general. Also to understand context of past experience where applicable and for specific areas of use.

The interviews should be transcribed into a descriptive document relating findings around this. An example of the interview transcription should read as follows:

"The interviews were conducted with five participant, three of which have never had any experience with VR. Of those who had previous experience with VR, one was a VR developer with two years of experience. The most common VR technologies used by the two participants with VR experience is the Oculus Quest. Four out of the 5 participants had used Markdown syntax previously for reasons ranging from writing a blog post to developing....."

Usability Test Analysis

As earlier described, Quantitative metrics collected during the usability testing can be analysed as follows:

1. Completion rate
Number of tasks completed successfully / total number of tasks
2. Efficiency or Time to task completion
Should be calculated by the median. Mean times can be heavily skewed by extreme data points
3. Completion time at first attempt
How long it takes to complete each task at first attempt

4. Number of errors
Number of errors per task
5. Frequency of errors.
Count of each unique error per task
6. Severity of errors.
Assigned numbers one to three or one to five depending
7. Satisfaction Rate.
Should be calculated using the system usability scale in Fig3.

For qualitative analysis of the usability test, descriptive words or phrases can be used to analyse the observations made during each task. Since these tasks are not based on correctness, the analysis should highlight things like the participant's first impressions, How much functionality was discovered during the task, how easily they understood what to do, how well they were able to recover from errors e.t.c.

An example of qualitative data collected for each task should be as follows:

1. First impressions: Happy, overwhelmed, confused, surprised, curious, skeptical e.t.c
2. Recovery from Error: Easy, difficult e.t.c

Qualitative data analysis is highly flexible and is determined by the test, the product and what exactly the evaluators are seeking to observe, therefore there are different ways that this information can be collected as long as they satisfy the research questions which the evaluator has in mind. The qualitative data should be outlined similar to the method of the heuristic evaluation analysis.

Both qualitative and Quantitative data should be collected separately for each scenario/task.

Survey Analysis

The result of survey analysis is also quite flexible as it concerns method of reporting. For this method of analysis and reporting could be in the form of charts, graphs, tables, averages, medians depending on preference and on the capabilities of the data collected. The chart below shows a survey result for a Video on Demand Service (VoD) conducted by Sofia Fröjdman (2016)

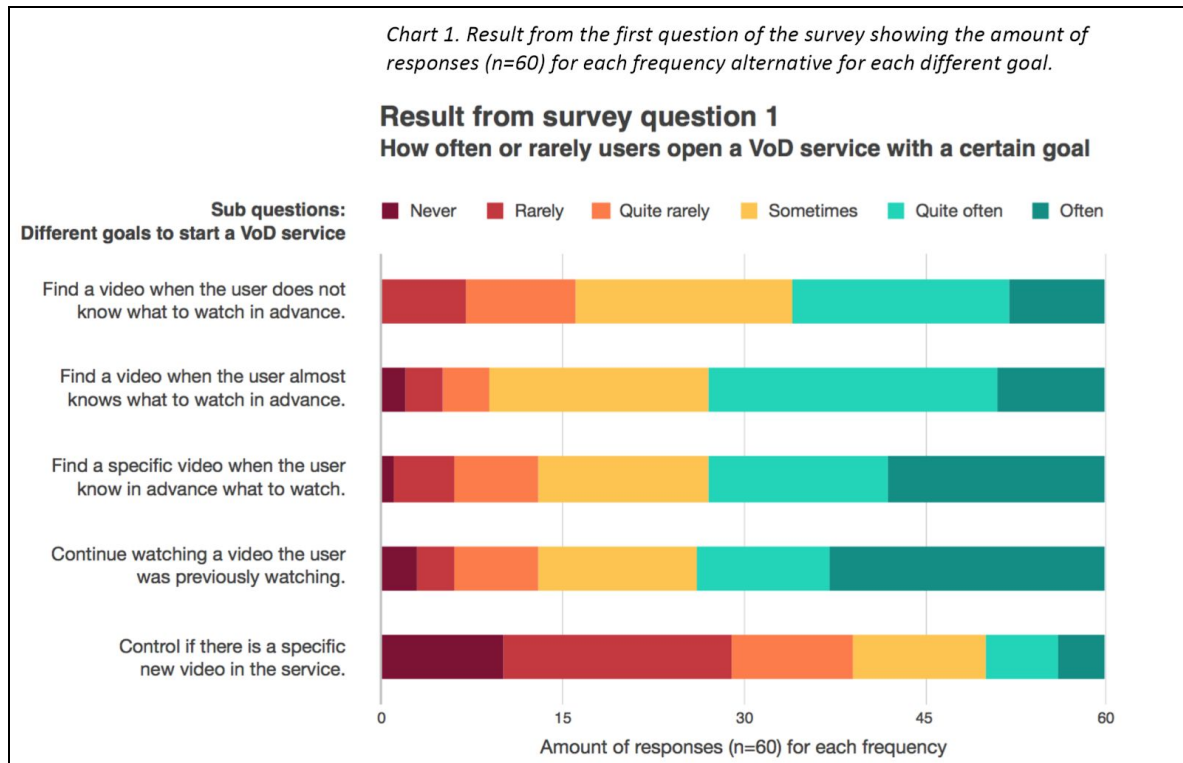


Fig3: Result of survey conducted for Video on Demand Service (VoD) by Sofia Fröjdman (2016)

A variety of methods can be used to represent survey data as long as they correctly and efficiently convey the intended interpretation for each question. Each question can also be represented in multiple ways.

For short-paragraph-answer questions or any open ended questions in the survey, a summary paragraph describing responses should be reported. It could also be used to further explain the charts where applicable

Comprehensive analysis

This section should describe in a comprehensive manner the analysis procedure, what data was used and how the data was compared or analysed. Important patterns that were revealed through each procedure should be highlighted and overall observations and inferences should be extracted and reported. All findings should be tied back to the goals of the research and the research questions should be addressed using these inferences. Visualizations can also be used where necessary.

In this section, expectations can also be compared with outcomes. External factors which may have influenced the results of any test should also be highlighted.

This section can be broken down into different areas of analysis although not limited to the below examples.

1. Analysis of user behaviour, preferences e.t.c
2. Analysis of user experience problems
3. Analysis of External influences and factors

Suggestions and Recommendations

Based on the analysis and findings gathered above, recommendations should also be reported. These suggestions could range from software changes to interface adjustments to better clarity around user instructions. These guidelines can also be informed by Neilsen's heuristics, categorized as improvement suggestions under each heuristic.

Discussion and Future research

User research should be continuous even after the tool has been successfully launched and deemed usable by the majority of users. One way to keep track of user behaviour will be to define ways by which the impact of the product can be measured and incorporate methods of measuring this metric into the tool. An example of such metrics are:

1. Number of monthly active users
2. Retention: percentage of users who return
3. Number of unique users using the application
4. Total number of times people use specific feature e.g the build button
5. Percentage of successfully built exhibits
6. Number of detected errors
7. Number of remained errors
8. Latency

While these serve as effective examples, the possible metrics for measuring success/impact are not limited to these.

Currently we have created an active feedback collection method into Mallocci by the use of google forms linked directly into the application. The link to the form is shared below

<https://rb.gy/enkzp7>

Appendix

Appendix A: Consent Form

Below is the format for the user testing consent form which will be adapted for use with Mallocci. This form was originally created by Eric Mao, a student of the University of California, Berkeley.

This format is in alignment with Vetenskapsrådet's recommendations (1990) as previously referenced in the consent and confidentiality agreement sub section under the research design section.

Usability test consent form

Please read and sign this form.

In this usability test:

- You will be asked to perform certain tasks on a computer.
- We will also conduct an interview with you regarding the tasks you performed.

Participation in this usability study is voluntary. All information will remain strictly confidential. The descriptions and findings may be used to help improve the Kinect application. However, at no time will your name or any other identification be used. You can withdraw your consent to the experiment and stop participation at any time.

If you have any questions after today, please contact Eric Mao at eric.mao@berkeley.edu

I have read and understood the information on this form and had all of my questions answered

_____	_____
Subject's Signature	Date

Fig4: Consent Form Developed by Eric Mao, A student of UC Berkeley

Appendix B: Participant Recruitment Screener

1. What is your opinion about VR technology in general?
Quality Likert scale: 1 = Very negative, 5 = Very positive
2. On a scale of 1 to 5, rate your experience with VR technology
Agreement Likert scale: 1 = very unfamiliar and 5 = very familiar)
3. On a scale of 1 to 5, how interested are you in VR technology?
Agreement Likert Scale: 1 = very disinterested, 5 = very interested
4. Do you create content for VR technology?
Dichotomous Likert Scale: Yes/No
5. If yes to the above question 4, rate your level of expertise on a scale of 1 to 3
Value Likert Scale: 1 = Beginner, 3 = Advanced
6. If there was a way to easily create VR content, how will this influence your interest in creating VR content?
Likelihood Likert Scale: Not At All/Very Little/Somewhat/To A Great Extent
7. Please rate your level of comfortability with the following technologies/platforms. 1.VR headsets, 2.Apple electronics, 3.Windows, 4.Android, 5.Markdown Syntax
Agreement Likert Scale 1 = Not at all comfortable, 5 = Very comfortable
8. Please rate your perceived visual ability
Quality Likert Scale: 1 = Legally blind, 5 = Perfect eyesight
9. Which of these do you think is most important for VR content creation?
Options: Ease of access to tools, Software development ability, Interest, Computer science degree, Familiarity with VR technology.
10. Would you be willing to participate in an interview?
Dichotomous Likert Scale: Yes/No

Appendix C: Heuristic Evaluation tasks

User Group	Tasks
<p style="text-align: center;">Group A</p> <p>Tools: Web browser</p>	<ol style="list-style-type: none"> 1. Open Mallocci Gallery Page 2. Choose any exhibit and open the page 3. Display this in VR 4. Exit the VR space 5. Click on the Wikipedia explorer 6. Type in “UC Berkeley” in the search bar 7. Explore the VR space 8. Return to Starting point 9. Exit 10. Examine the Markdown guide
<p style="text-align: center;">Group B</p> <p>Tools: Phone, cardboard headset</p>	<ol style="list-style-type: none"> 1. Open Mallocci Gallery Page 2. Choose any exhibit and open the page 3. Fit the phone to the cardboard headset. 4. Go into the VR space 5. Navigate the space 6. Return to Starting point 7. Exit 8. Examine the Markdown guide
<p style="text-align: center;">Group C</p> <p>Tools: Electronic VR headset</p>	<ol style="list-style-type: none"> 1. Fit the VR headset 2. Navigate to the Mallocci Gallery 3. Choose any exhibit to display 4. Study the controls guide at the entrance of the exhibit 5. Use that guide to navigate the space 6. Return to starting point 7. Exit 8. Navigate to the wikipedia explorer 9. Type in “UC Berkeley” in the search bar (still using the controls) 10. Explore the VR space 11. Return to Starting point 12. Exit and take off headset 13. Examine the Markdown guide

Appendix D: Interview Questions

- Have you ever used a VR system? If yes, when was the last time
- Do you use it frequently and if not when

Based on response to the above questions, then categorized and follow up answers are asked based on user category

User Group	Interview Questions
Group A	<ol style="list-style-type: none"> 1. What do you know about VR? 2. Have you never used it by choice or due to lack of opportunity? 3. What do you expect the VR environment in general to look like? 4. Have you ever been to a museum? 5. Is this an activity you typically enjoy? 6. Do you have any sight problems? 7. Do you have any hearing problems? 8. Have you ever used Markdown syntax? 9. Based on the description of this tool to you, describe your expectation for this experience
Group B	<ol style="list-style-type: none"> 1. Describe your general experience using VR 2. How often do you use VR systems? 3. Is this an activity you enjoy? 4. How does the VR environment affect you? 5. Is there anything you would improve about VR systems or that you wish was done differently? 6. Do you create any form of web content? 7. Would you be interested in VR content creation if it were made easy for you? 8. Do you have any sight problems?

	<ol style="list-style-type: none"> 9. Do you have any hearing problems? 10. Have you ever used Markdown syntax? 11. Based on the description of this tool to you, describe your expectation for this experience
<p style="text-align: center;">Group C</p>	<ol style="list-style-type: none"> 1. Describe your general experience using VR 2. What do you typically use VR systems for? 3. How long do you comfortably spend in the VR environment? 4. What kind of VR content keeps you the most engaged? 5. How does the VR environment affect you? 6. Is there anything you would improve about VR systems or that you wish was done differently? 7. What kinds of VR content do you create? 8. How often do you create VR content? 9. Do you find the process involved to be too tasking? 10. What's your opinion about using Markdown for VR content creation? 11. Do you have any sight problems? 12. Do you have any hearing problems? 13. Based on the description of this tool to you, describe your expectation for this experience

Appendix E: Usability Testing Tasks

* users are expected to think aloud while carrying out these tasks.

1. Explore the application and share your thoughts
2. Imagine that you would want to display one of the exhibits in the Gallery, how would you do it?
3. Imagine that you were to search and display an article from Wikipedia. How would you do it?
4. Please repeat step 4 using a headset (Electronic or cardboard headset to be used)
5. Imagine that you were to create an exhibit with 1 room, one text display and 1 picture from a web link, how would you do this? How would this differ if you were to upload a picture?
6. Imagine that you were to repeat step 4 above but with multiple rooms, How would you do this?
7. Imagine that you were to customise your exhibit by changing the color theme, what do you think can be changed and how?
8. How would you publish a Markdown file that you have written in the editor?
9. What if your exhibit isn't successfully built, what steps would you take to troubleshoot?
10. What kind of issues/errors would you anticipate while using the markdown tool?
11. Imagine you were to edit something you had successfully published, how would you do this?

Appendix F: Post Usability Test Questions

1. Did you encounter anything surprising or unexpected?
2. Did you feel like you knew what you had to do at each step of the task
3. Did you feel in control of the experience?
4. How would you describe your overall experience?

Appendix G: Survey Questions

1. Rarely do I do any of the following VR-related activities
 - a. Play games
 - b. Watch videos
 - c. Create content
 - d. View Exhibitions
 - e. Learn purposes

Answer options for each statement would be based on a frequency likert scale:

Never, Very Rarely, Rarely, Occasionally, Very Frequently, Always

2. Rank the following in order of importance to VR content creation
 - a. Interest
 - b. Familiarity with VR technology
 - c. Ease of access to tools needed
 - d. Software development ability
 - e. Computer Science degree

Answer options will be numbered 1 to 5, 1 being least important and 5 being most important. No one ranking can be assigned to more than one question.

3. If I were interested in VR content development, I know how to go about it

Answer options will be Yes / No

4. What frustrates you the most about VR?
 - a. Complexity of use
 - b. Lack of interesting content
 - c. Expensive cost of gadgets
 - d. Lack of access to the technology
 - e. Limited user-defined input in content creation

Answer option will be multiple choice to select all that apply

5. On a scale of 1 to 5, how likely are you to create VR content if the process was made very easy and usable by anyone irrespective of level of experience

Answer option will be a box accepting only numbers between 1 to 5

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