



blickwinkel tour

Virtually experience historical places

BLICKWINKEL TOUR

Who we are:

- Creators and providers of historical sightseeing tours with Virtual & Augmented Reality
- Developers of an all-in-one software solution that can be easily used by tour guides
- Creators of remote VR experiences for classrooms and virtual learning



OUR VISION



Create impressive
VR visualizations



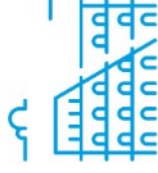
for innovative
educational experiences



to excite for history
on location

SNEAK PEAK: THE BUS VR TOUR

Let's take the VR headsets and dive into the history of the former nazi party rally grounds in Nuremberg, Germany.



RULES

1. There are NO rules!
2. Ask us anything, there are no dumb questions!
3. Try and fail, try and fail... succeed!
4. Don't be frustrated. Tech is nasty!



TODAY'S AGENDA

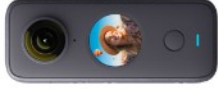
1. Introduction of the History-Maker-Kits
 2. Short introduction: Mozilla Hubs with showcases
 3. Hands on: "Concept Creation"
Creating an immersive story concept, gather media
 4. Recap "Media Content Creation"
 5. **Lunch break**
 6. Theory: 360° Content
 7. Hands on "360° Media Content"
Creating 360° content, data transfer
-
8. Recap "360° Content Creation"
 9. **Coffee break**
 10. Live tutorial: Mozilla Hubs
Understanding the concept of Mozilla Hubs, creating an own tour, benefits of Mozilla Hubs
 11. Hands on "Mozilla Hubs"
Creating own scenes in Mozilla Hubs, content integration
 12. Recap "Mozilla Hubs" & insights and results
 13. Further procedure, documentations, support, appointments & availability
 14. **Let's go, kick it!**

1. HISTORY-MAKER-KITS

What components contains the History-Maker-Kit and what can you basically do with it?



Pico G2 4K
VR headset



INSTA 360 ONE X2
360° camera



SAMSUNG Galaxy Tab A8
tablet



Saramonic Blink 500 B6
microphone system

Accessories: TAF Case for transporting the hardware components, Smatree Teleskop selfie stick with a stand for the 360° camera, 32GB Sandisk SD card as a storage medium for created contents and miscellaneous charging accessories for the hardware components

1. HISTORY MAKER KITS



1. HISTORY MAKER KITS

**NOW MAKE YOUR HANDS DIRTY
AND GET YOUR KITS READY TO SHOOT!**





1. HISTORY MAKER KITS



HINTS

- Connect VR glasses to WiFi
- Connect 360 Camera with tablet
- Install Open Camera from PlayStore to use Microphone
- Install a voice recorder app for audio content / interviews
- Keep your battery power in mind
- Always keep VR Glasses out of sunlight

2. MOZILLA HUBS VIRTUAL TOUR

We will use the headset for a multi user VR tool as a virtual tour:

We discuss: What is immersive storytelling?
Showcase of a remote guided tour in Mozilla Hubs



gfa-vr.link/psxe8N6

3. HANDS ON CONCEPT CREATION AND STANDARD MEDIA

Create a work group and develop your own short immersive story plus gather or create photo, video & audio content.

Goal: At the End of the day we can experience your self-made virtual tour in Hubs.

BE CREATIVE!

Timeslot: 1.5 hours





HINTS

- Start with pen and paper
- Create a short immersive storyline
- Visualize the scenes you want to show virtually
- Use your phones on tripod to shoot photo and video (like Interviews)
- Keep in mind that you have limited battery life
- Go online and find some media content
- Keep it short and simple

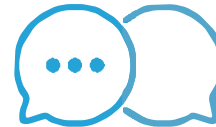
MEDIA FORMATS

- 2D Images (.jpg & .png)
- 2D Videos (.mp4)
- Presentations (.pdf)
- Audio-Files (.mp3 & .ogg)
- Stream-Links (like Youtube or Vimeo)

RECAP

CONCEPTING AND MEDIA CONTENT CREATION

Discuss complications while creating content, data process and transfer, key facts regarding data creation, applications for editing your files.



5. LUNCH BREAK



6. A BIT OF THEORY: 360° CONTENT EXPLAINED



6. THEORY: 360° CONTENT EXPLAINED 360° MEDIA CREATION



Types of media you can shoot with the INSTA 360 ONE X2 Camera:

1. 360° Panoramic Images
2. 360° Panoramic Videos

Quicklink: [Insta360 One X2 firmware update issue](#)

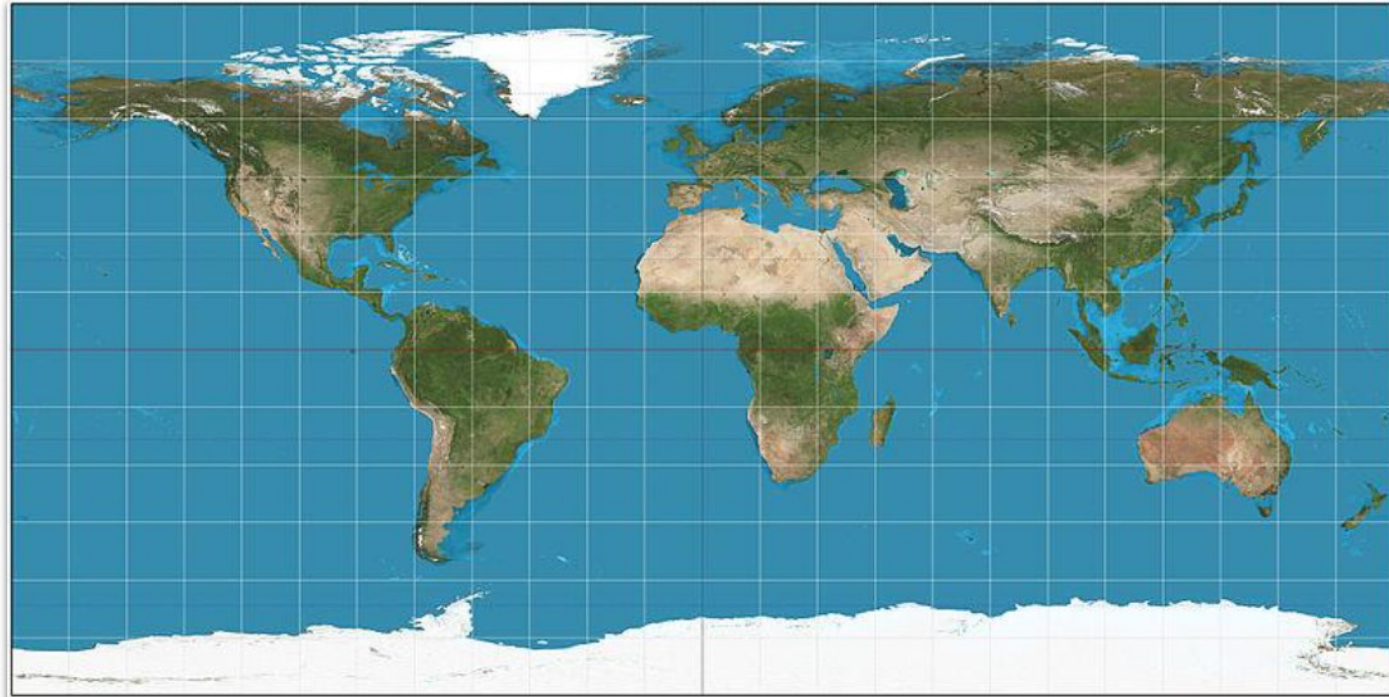


WHAT IS 360° MEDIA?

**6. THEORY: 360° CONTENT EXPLAINED
360° MEDIA CREATION**



THIS!



6. THEORY: 360° CONTENT EXPLAINED 360° MEDIA CREATION



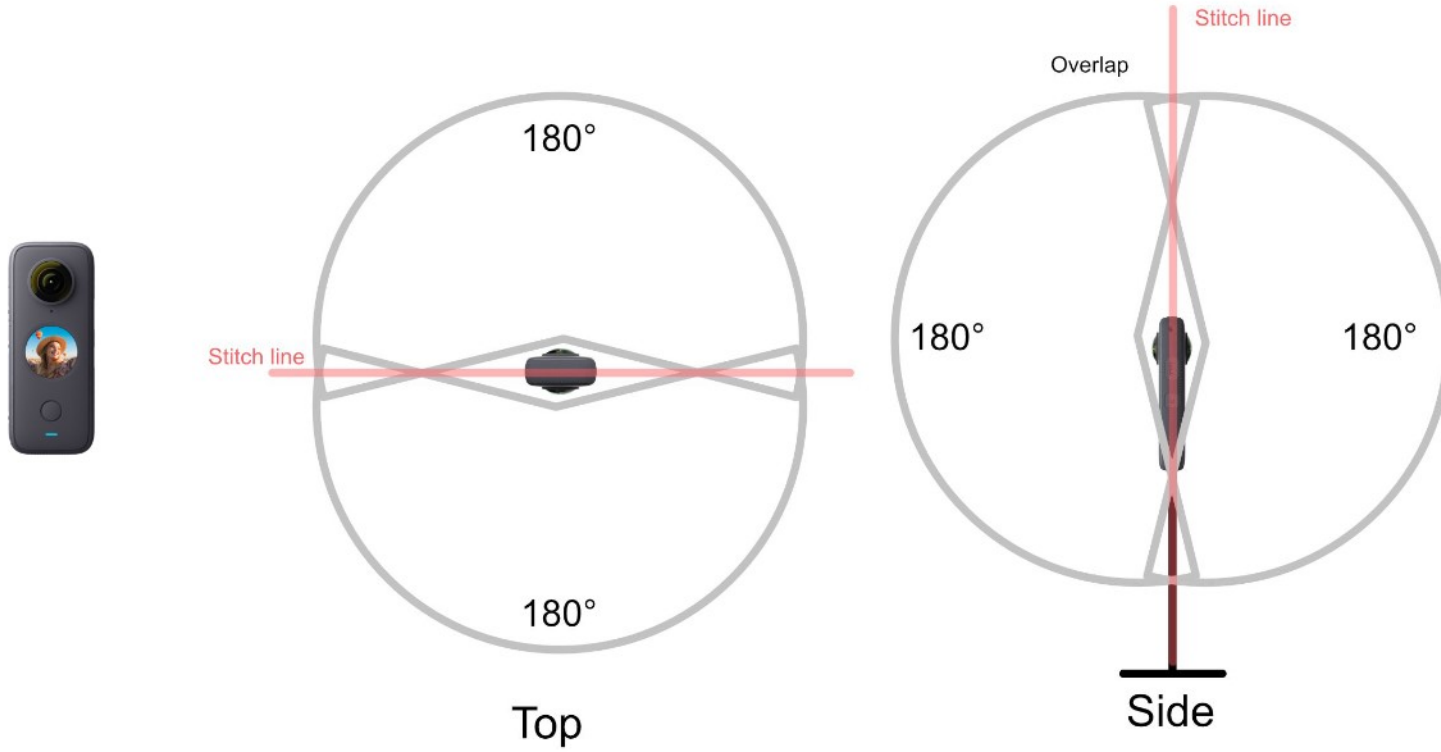
Equiarectangular projection of a sphere





6. THEORY: 360° CONTENT EXPLAINED 360° MEDIA CREATION

MIND THE STITCH LINE!





6. THEORY: 360° CONTENT EXPLAINED 360° MEDIA CREATION





6. THEORY: 360° CONTENT EXPLAINED 360° MEDIA CREATION

Equirectangular projection of a sphere





6. THEORY: 360° CONTENT EXPLAINED

360° MEDIA CREATION

Best practices for 360 shooting:

- You may put the camera on a tripod
- Always cover lenses before and after use. Prevent them from getting scratches
- Avoid scenes with difficult light (e.g. people in dark room in front of bright window)
- Standard scenes be shooted from a natural eye-line perspective (~1.6m above ground)
- Try to avoid shooting in direct sunlight (or you'll have lens flares)
- Mind the stitch line! (see page 18)
- Trial and error: shoot more than you need and choose later
- Always shoot the highest quality and resolution. You can downscale later on.
- Turn devices off to spare battery life

Resolution video: 5.7k | Resolution photo: 6080 x 3040 (PureShot On / RAW)

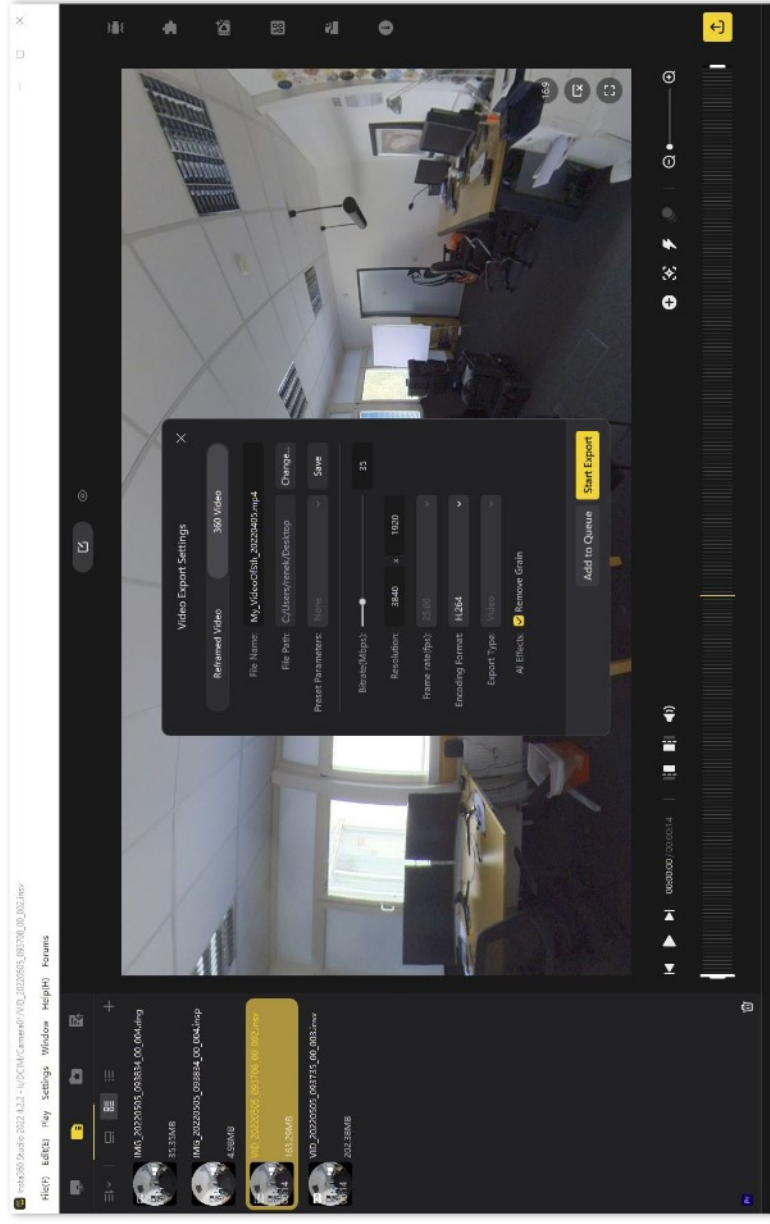


6. THEORY: 360° CONTENT EXPLAINED 360° MEDIA EDITING

For stitching and exporting

Download and install:

Insta360 STUDIO 2022:
www.insta360.com





6. THEORY: 360° CONTENT EXPLAINED 360° MEDIA EDITING

Open Source software
Optional for RAW Photo editing

Download and install:

darktable

www.darktable.org/install/

GIMP

www.gimp.org



6. THEORY: 360° CONTENT EXPLAINED 360° MEDIA EDITING



Best practices for 360 editing:

- Downscale your video footage to match your viewer medium (i.e. lowest data rates you can get if you put it online)
- A powerful PC will spare frustration (High-Resolution editing is very demanding)
- Final result should always be a .jpeg or .mp4 with 2:1 ratio
- Make your video as short as possible
- Easiest way to get rid of the tripod is a sticker (set in Insta360 Studio)

Example Video Export Settings for Hubs:

Resolution: 3840 x 1920 | Datarate: 35 Mbits | Codec: H264 | Remove grain: On



INSTA360 ONE X2 FIRMWARE UPDATE ISSUE

Resolving the problem with activating the 360° camera when activation fails

Problem:

Each 360° camera needs to be activated through the Insta360 app prior to being used. It appears that some cameras need a firmware update first, before you are able to activate and connect them.

To update the camera with the current version of the firmware the mobile device, with which you are trying to update or activate the camera, needs mobile data available or to be connected to an online WiFi network.



INSTA360 ONE X2 FIRMWARE UPDATE ISSUE

Resolving the problem with activating the 360° camera when activation fails

Solution #1:

Try to connect the provided Samsung Galaxy Tab A8 tablets to an online WiFi network and go through the connection, update and then through the activation process using the Insta360 app.

Solution #2:

Download the Insta360 app to another mobile device (smartphone or tablet) that supports the app, has mobile data available or is connected to an online WiFi network and go through the connection, update and then through activation process using the Insta 360 app.



INSTA360 ONE X2 FIRMWARE UPDATE ISSUE

Resolving the problem with activating the 360° camera when activation fails

Links that will help you resolving this issue:

Insta360 app for Android: <https://play.google.com/store/apps/details?id=com.arashivision.insta360akiko>

Insta 360 app for iOS: <https://apps.apple.com/de/app/insta360-go-2-one-x2-r-x/id1491299654>

Insta360 ONE X2 - Activation issue: https://youtu.be/je2l_fRa74c

Activation of Insta360 One X2 - Step by step instructions for Android: <https://youtu.be/VPIGcjn2zMk>

Solution #3:

Alternatively the firmware update can also be processed by using the brute-force method via SD card as shown here: <https://youtu.be/fGzPvLI1j7o>

7. HANDS ON “360° MEDIA CONTENT CREATION”

Teamwork: Search for 2-3 suited scenes to shoot 360° footage indoor and outdoor and transfer your data to a device or editing application.

Timeslot: 30 minutes



8. RECAP “360° MEDIA CONTENT CREATION”

Discuss eventually occurred complications while creating content, data process and transfer, key facts regarding data creation, applications for editing your files.



9. COFFEE BREAK



10. HOW TO BUILD YOUR OWN VR SCENES: LIVE-TUTORIAL IN MOZILLA HUBS

Creating rooms and scenes with Mozilla Hubs (understanding the concept of Mozilla Hubs), what kind of media content can be used, what's important to know when creating and editing, barriers and benefits.

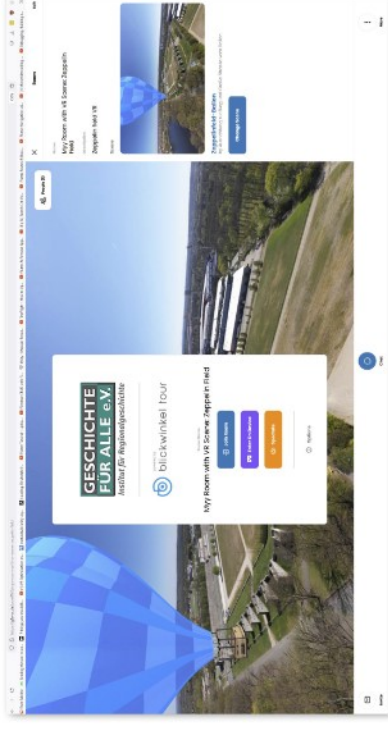
hubs
moz://a

10. LIVE-TUTORIAL: MOZILLA HUBS BASIC CONCEPT

Building scenes:
Mozilla Spoke Scene Editor



Viewing scenes:
Mozilla Hubs VR Client



10. LIVE-TUTORIAL: MOZILLA HUBS BASIC CONCEPT

Show your rooms

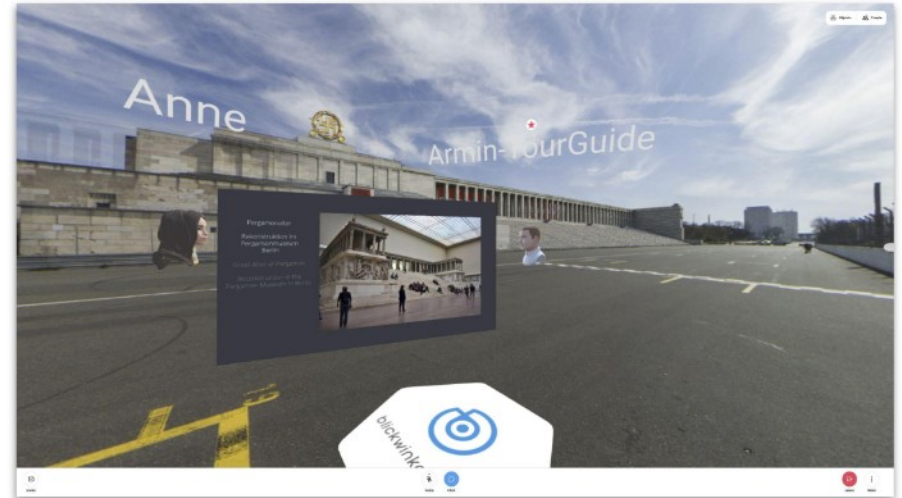
1. Create a room
2. Invite people
3. Show content and change scenes live
4. Make guided group experiences

Example link to a VR room:

<https://gfa-vr.de/psxe8N6/my-room-with-vr-scene-zeppelin-field>

Short:

<https://gfa-vr.link/psxe8N6>



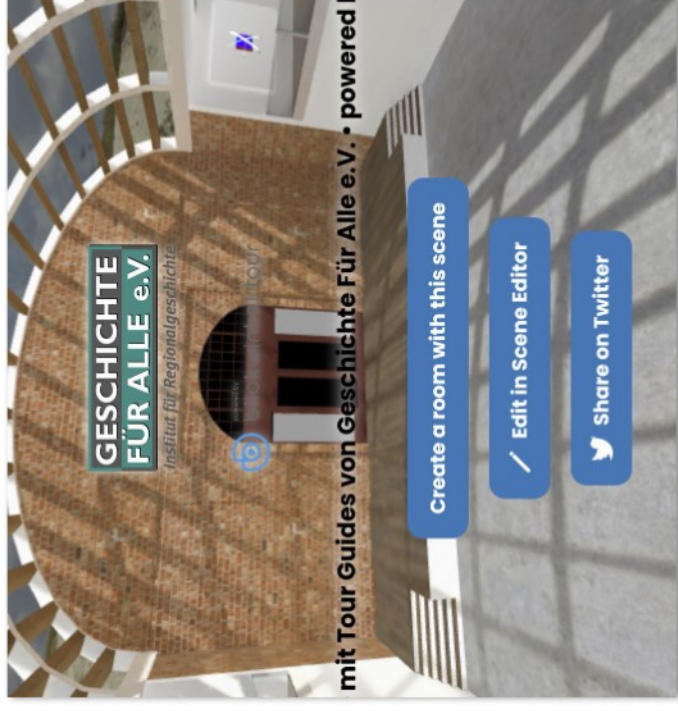
10. LIVE-TUTORIAL: MOZILLA HUBS BASIC CONCEPT

Show your scenes

1. Create scenes
2. Share them
3. Your audience can create their own rooms

Example link to a VR scene:

<https://gfa-vr.de/scenes/nzQaJji>



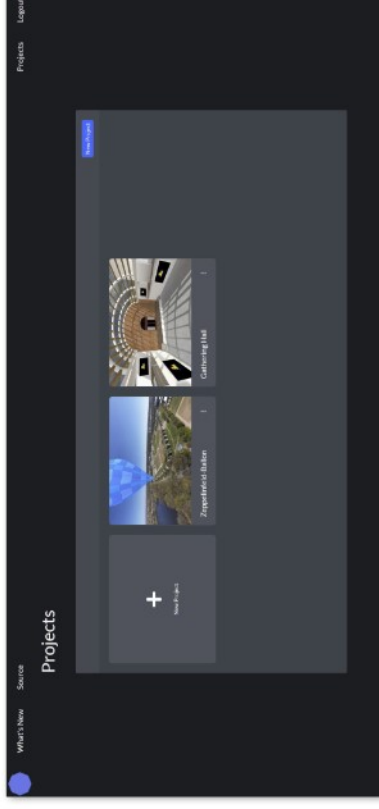
10. LIVE-TUTORIAL: MOZILLA HUBS BASIC CONCEPT

Edit your scenes

1. Create new scenes
2. Edit existing scenes
3. Publish them

Example link to a scene in Spoke:

<https://gfa-vr.de/spoke/projects/mxNMLti>
(you need to be logged into your account)



10. LIVE-TUTORIAL: MOZILLA HUBS SUPPORTED MEDIA FORMATS

Types of media you can use to build your scenes:

- 2D Images (.jpg & .png)
- 2D Videos (.mp4 & Stream Services)
- 360° Panoramas (Images and Videos)
- 3D Objects (.glb-Format)
- Presentations (.pdf)
- Audio-Files (.mp3 & .ogg)

10. LIVE-TUTORIAL: MOZILLA HUBS GET YOUR HANDS DIRTY

Useful stuff you might need to create VR scenes:

- Media tools & hardware (like the History Maker Kit)
- Preferably a PC or laptop with a mouse
- VR glasses, tablet / phone for viewing
- Mozilla Firefox Browser
- Software tools for editing video, audio and photo
- Stable and powerful internet connection
- An accessible email address
(you can use eab.memories@gmail.com at the workshop)
- A 3D design tool like Blender (advanced)
- A story-script and a creative mindset

11. HANDS ON “MOZILLA HUBS”

Teamwork: Create your own rooms and scenes plus implement your created content.

Timeslot: ~1 hour



12. RECAP “MOZILLA HUBS”

Insights into your results, discuss eventually occurred complications or difficulties plus Q&A.



13. FURTHER PROCEDURE

- **How can you reach out to us?**

E-mail us: eab@blickwinkeltour.de

- **How do we make knowledge accessible?**

We're going to provide this documentation and further materials via Google Drive.

- **When and where we're going to meet again?**

Follow up workshops & remote sessions

- **What kind of assistance can we provide?**

Coachings via Zoom or similar platforms,
Helping you create your scenes



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