LINAS SUCHE - TECHNICAL GUIDELINES

April 18 2023 (Version 1)

Technical Information

1. App loads room-space tracking on launch. 1st green circle in the top-left corner shows that room-map is loaded. As soon as the app recognizes where the device is in the room – second green circle is activated. This usually happens as soon as the app is pointed at the wall characters. **As long as both circles in the upper left corner are green – app is running well, actively tracking room-space, and should know where the device is in the room.**

2. Several images are used as precise targets for augmentation:

   1. Wall characters
   2. Printed map-parts in corners of the city model
   3. Volksbad pool water texture

For other objects, and general position of objects and activation-areas in the room, various algorithms and aproximations are used.
**In general, butterfly guides users to look directly at these target images if they follow him closely. Users should always try to follow the butterfly.**

3. **App can be restared by tapping the center of the screen quickly five times.** "Are you sure you want to restart the Tour" dialog is shown. Press yes to restart the app, press No to continue the ongoing tour.

Troubleshooting Tips

1. PROBLEM: When app is paused during the tour (app is minimized, moved out of focus) and then resumed, world-tracking is interrupted, and objects are missplaced.

   SOLUTION: **This is expected, app should not be paused while the tour is in progress**, because app is not receiving camera and sensor information from the iPad during the interrupt, and loses tracking. **It is sometimes possible to continue tracking, by pointing camera at well-established markers (characters on the wall, printed parts of the city model etc), and moving the device around (looking at various parts of the room).** If the second green circle lights up again – tracking is resumed, and tour might be continued. If not – app should be fully restarted (closed and started again).
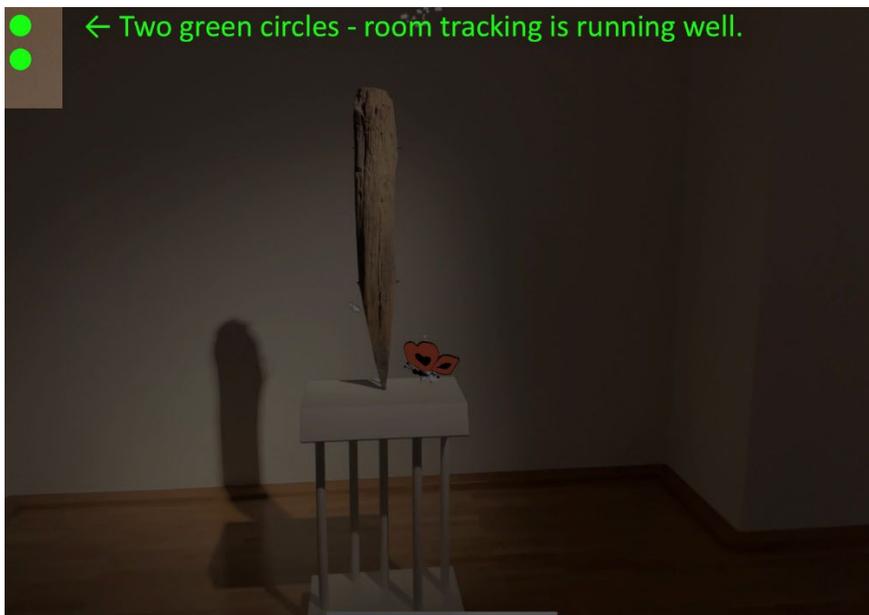
2. PROBLEM: Objects are slightly missplaced (i.e. Creation of Giessen sequence, virtual representations of the city model are not well aligned with the actual model).

SOLUTION: User is probably not close enough to the defined target areas (corners of the city model, characters on the wall, etc), and camera does not see them well. **User should point their iPad directly at those areas and approach them closer.** Then likely camera will pick them up, and missalinged animated objects will "lock into place".

3. PROBLEM: Lina reaches the end of the bridge on her bicycle and narration stops, butterfly is circling the Volskbad model – nothing is happening.
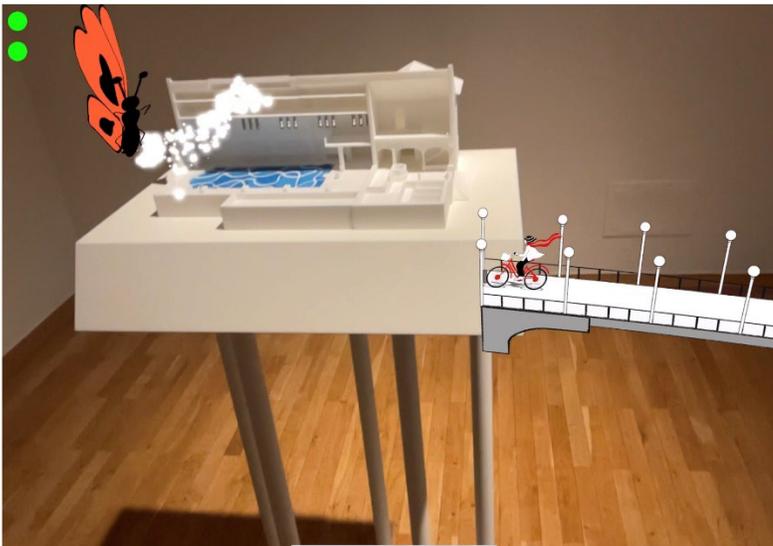

SOLUTION: Similar to the previous issue, camera is not registering properly the Volskbad target, pool water texture, since user is to far away. **User should come closer with their iPad, and look with it directly at the middle of the Volskbad model**. As they approach, device will detect the target well, and continue the narration / tour.

4. PROBLEM: Butterfly is not visible in the Jar when app is started, or when Lina is tapped and tour starts.

   SOLUTION: This should not be happeining, if it does happen - it is a bug. **It might be solved by poiting iPad in a different direction (not looking at Lina), than looking back at Lina**. If it doesn't help, app should be restared. Again, this should not be happening, if it does – let us know, we should try to fix it in an update when we can make it.

5. PROBLEM: "Strange" interface appears, various buttons, sliders, text messages all over the screen.
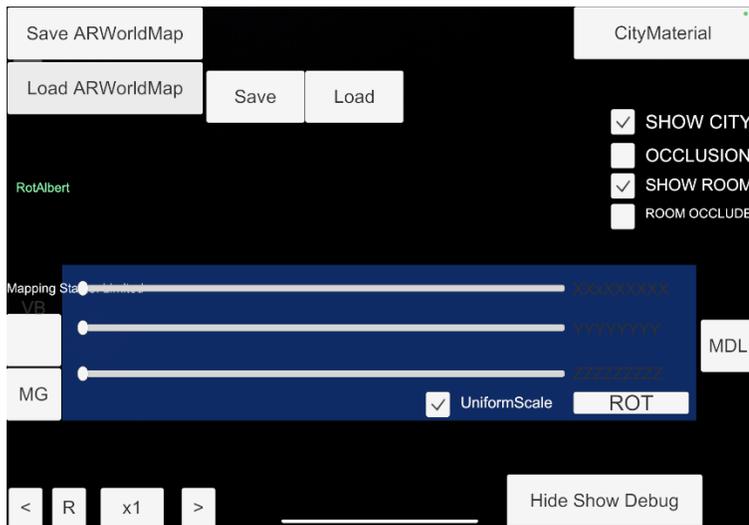
   SOLUTION: This is development / debug screen of the app, it is used for testing the app and fixing possible bugs in the future. It is accessed by quickly repeatedly tapping in the top right corner of the screen. Although unlikely, users could access this debug interface by accident by tapping the screen all over the place. **If they do, they can close it by tapping again several times quickly in the top right corner of the scree**

6. PROBLEM: Butterly should guide user to the Pfahl, but it misses completely and flies elsewhere in the room. It does not miss the pfahl by several centimeters, but just flies in completely different direction. When user apporahces the pfahl narration does not happen, or if it does, worms are nowhere to be found.

   SOLUTION: This should never happen, but if it does, **app should be restared, and this bug should be written down / reported.** If this happens, it means that the room tracking is completely off, right from the start, due to some strange circumstances (many people in the room, unusual lighting conditions, app not properly started, hardware failure, AR system failure) or some udiscovered bug. If this happens repeatedly and on multiple devices, it should be tested and researched more, until bug is found and fixed.

7. PROBLEM: There is no sound in the app.

    SOLUTION:

    a. Check whether the tour is started. First sound that can be heard is Lina's voice, and it only starts after the user taps on her animated portrait on the wall.

    b. If Tour is running, check whether the iPad is muted (by pressing physical volume +/- buttons).

    c. If iPad volume is not 0, check whether the correct color-coded headphones are used.

    d. If they are, check the volume on them is not silenced (they have physical volume buttons as well, press + several times)

    e. Check headphones are on and paired, by opening iPad's preferences (gear icon) than going to Bluetooth (bluetooth shoud be ON, headphones, named by their color, should say "Connected". If they are not connected – tap their name to connect them. Check that they are turned on, by long-pressing physical power button on headphones as well (small blue light blinks on them when they are powered-on and ready for connection)

8. PROBLEM: Screen is black, iPad is completely non-responsive.

    SOLUTION: Probably the battery is empty, device needs recharging. **Make sure that iPad's are manually locked when not in use (short click on the power button, it turns their screen black), because auto-lock is disabled and always active screen rapidly drains battery**

9. PROBLEM: Screen goes dim during the tour, usually during the pfahl sequence.

    SOLUTION: This should not be happening because auto-lock on all iPad was set to "Never". But check this setting nevertheless, by going to iPad's Preferences (gear icon) then searching "Auto-lock", opening auto-lock screen settings, and selecting "Never"