Protokoll Nr.

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| Thema/Anlass: | Open Questions to Flox Rox Systems |
| Datum: | 14/09/2017 |
| Zeit: | 10:15 – 10:55 |
| Ort: | Skype |
| Teilnehmende: | Andreas Hueni,  Roland Mosimann,  Patrick Wigger,  Andreas Burkart, Developer Flox Rox |
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| Gäste: | - |
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| Protokoll: | Roland Mosimann |
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| Protokollkopie an: | Alle Teilnehmer |
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**Traktandenliste**

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| **Traktanden** | | **Wer** |
| 1. | Communication with Device |  |
| 2. | What can be received in terms of status |  |
| 3. | How can Data be Imported |  |
| 4. | Device Control |  |
| 5. | Data Visualization |  |
| 6. | Export, Datafiles |  |

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| **Protokollpunkte** | | **Wer** | **Termin** |
| 1. | **Communication with Device**  The device is build with:   * Arduino due, * Xbee, * hc05-bluetooth   Available communication ports with the device are Bluetooth and COM-Port.  Commands:   * The available commands are optimized for device development purpose. * The commands can be adapted/extended on request   **The application should notify the device on connection, for it to go into “app connected”-mode.** |  |  |
| 2. | **What can be received in terms of status**   * Diagramm of last datastreams as RAW incl. DC / Radiance + Reflectance * GPS * Sensor temperature * Integrationtime * Mode (auto/manual) * Duration until next measurment |  |  |
| 3. | **Device Control**  The device cannot be damaged with the commands.  The measurement cannot be adapted, because it is very “conserved”. Measurements can not be interrupted.  Steps of a measurement (ca. 1-10sec):   1. WR1 2. VEG 3. WR2 4. DC WR 5. DC VEG   The time is used on the board for stuff like filesystem, therefore the additional clock and the command “T” |  |  |
| 4. | **Data Visualization**   * **To visualize the progress of a measurement, a short “preview” of each step should be returned** * **A preview can contain around 20 pixels** * **GPS-Position should be displayed** |  |  |
| 5. | **Export, Data files**  The data files are stored on the SD-card as:  **Measurements:**  **→SDCARD/YYMMDD/hhmmss.csv (one file per power-cylce)**  **Calibration:**  **→ SDCARD/x.csv**  The header of the measurements is still subject to changes, but the beginning will remain the same.  The original file format (CSV) should always be kept, as the post-processing (in R) is designed for it.  Non-CSV exports are not in scope at the time.  Direct upload to SPECCHIO would be nice to have.  All data shown in the App should be saved (for later access).  **The command “lf” - List Files should also return the free capacity of the SD-card.**  **The command** **“c” - ReadIn config.txt reloads and displays the configuration-file of the device, where actual settings (Mode, IT,...) are stored.** |  |  |
| 6. | **Use Cases**  **Live:**   * **Application connects to the device → receives last measurement, can trigger manual measurement.** * **Mode can be changed between manual and automatic** * **State of the device is shown**   **SD-Card:**   * **Old measurements should be read from the SD-card, because all available connections are to slow.**   **Out of scope are the following aspects:**   * **FLED control** * **Calibration-commands (Commands: Sx - L2)** |  |  |
| 7. | **OS**  Most Flox or Rox users use Linux and Windows, therefore we develop the application for Linux first.  Android would be nice to have. |  |  |
| 8. | **Buildtool**  **To A.Hueni it is not important what build-tool is used in this Project.** |  |  |
| 9. | **The devices firmware should receive the following capabilities**   * **Optimization returns time to test** * **Command to retrieve radiometric calibration** * **List files should return free space on sd-card** * **Short output after each step in a measurement, when a app is connected** * **Command to query mode (auto/manual)** * **Command to start “app-connected mode”** |  |  |