Graphical User Interface Specifications

1 Functionalities listing

Here is the exhaustive list of functionalities.

1.1 Active mode

The user can enable the ‘active mode’ which automate some tasks such as :

- importing photos being taken by a connected camera
- launching the reconstruction process whenever a new photo is available

1.2 Pictures importing

1.2.1 Import pictures from a folder

Browse the file system and pick a folder, then display all the present pictures to select the ones to import.

1.2.2 Manually import pictures from a connected camera

List all the connected camera and select one. Then display all the present pictures to select the ones to import.

1.2.3 Automatically import pictures from a connected camera

In active mode, whenever the connected camera takes a new photo, the photo is added to the input pictures.

1.2.4 Display the list of imported pictures

1.3 3 Reconstruction process

1.3.1 Manually start the reconstruction process

1.3.2 Automatically start the reconstruction process

In active mode, everytime a new photo is added, the reconstruction algorithm should be run to include this new picture.

1.3.3 Display the reconstruction progress status

As a percentage progress.

1.3.4 Display which pictures have already been processed

The pictures that have already been taken into account for the reconstruction, and for which all the calculations are complete, should be visible as such.

1.3.5 Display which pictures are being processed

The pictures currently processed by the algorithm should be highlighted as such.

1.3.6 Display which pictures have been rejected by the algorithm

The pictures yielding poor results and being rejected by the algorithm should be displayed as such.

1.3.7 Cancel an ongoing reconstruction

1.4 Configurations

A configuration defines the parameters used for reconstruction (threshold for example).

1.4.1 Select a fast configuration

This set of parameters makes for a fast but not accurate reconstruction.

1.4.2 Select a best configuration

1.4.3 This set of parameters makes for an accurate but slow reconstruction.

1.5 Scene repository management

1.5.1 Save a scene with his associated configuration

1.5.2 Browse existing scenes in the workspace

1.5.3 Open an existing scene in the workspace

1.5.4 Create a new scene

Name the new scene.

1.6 Map view

1.6.1 Display a map with markers that situate camera positions

This can be done only after a reconstruction and assuming that geolocation data were available (for instance, gps coordinates of each picture spot).

1.6.2 Navigate inside the map

The user can zoom and translate the map view.

1.7 3D rendering navigation

1.7.1 Display a resulting 3D model

1.7.2 Navigate inside the 3D view

The user can rotate and zoom on the 3D model being rendered.

1.7.3 Display the camera locations inside the 3D model

1.7.4 Take the camera point of view of a picture

1.7.5 Browse the previous generated models

This include intermediate models while the algorithm was running.

1.8 Pictures selection

1.8.1 Select pictures for reconstruction from a thumbnail list

1.8.2 Select pictures for reconstruction from the map

1.8.3 Select pictures for reconstruction from the 3D view

By selecting the cameras location.

2 User scenario

This sections will contain some user interaction scripts which illustrates the GUI features and use.