2nd EuroSDR Workshop on High Density Image Matching for DSM Computation

June, 13th-14th 2013, Vienna, BEV

The participants were asked to form six groups, each consisting of at least two members from academia, NMCAs and private sector.

Break-out Session 2

Topic: ***Conduct a "SWOT-analysis" (strength, weakness, opportunity, threat) of the Euro SDR Project "High DIM 4 DSM computation".***

Strengths:

- **Organization of the project itself and to have the test.**
- **Reduction from formerly four to two test areas.**
- **Consistent dataset and standardized questionnaire.**
- **Clear constraints about what to do/what to deliver.**
- **Broad range of software products used to process the same dataset.**
- **Good overview of available software including characteristics of each software.**
- **Large diversity of participant, coverage of major suppliers.**
- **Better understanding of common issues.**
- **See different tactics/options.**
- **Get feedback from different directions what leads to fruitful discussions.**
- **Great details.**
- **No additional costs.**
- **Pragmatic approach.**
- **Quick results.**
- **No ranking.**

Weaknesses:

- **Still a lot of open questions.**
- **Summary of availability and requirements of the software tools.**
- **Not all land-cover types covered, e.g. forest and mountainous areas are missing.**
- **Sometimes missing information about which parameters were used and why, specification is missing clearness (RGB, PAN, …).**
- **No consistent results, no consistency in reporting.**
- **No standards, no objective quality criteria.**
- **Quality measures**
    - **For areas in image**
    - **For land-cover classes**
- **Inconsistencies in the approach to create test data.**
- **Analysis not finished yet due to late data deliveries.**
- **No ground control points (check points).**
- **Demand for more detailed analysis, e. g. ground truth.**
- **Handling of the resulting data amount.**
- **DSM … “unintelligent” though colorized point cloud.**
- **More details on processing time.**

Opportunities:

- **Analysis for different land-cover types.**
- **Include more software.**
- **Objective test criteria, accuracy, quality measures.**
- **Upload of different results performed with different parameters.**
- **Make results + data available to anybody for analysis, teaching, etc.**
- **Answer the unsolved questions.**
- **Possibility to develop DSM testing method for DIM.**
- **Learn about general procedures for processing + data capture.**
- **Further use of this current test data set.**
- **Include ground truth.**
- **Making available ground control data à limit to small selected areas**
    - **Shadow, steep slopes**
    - **Building (manual multi image tachymeter)**
    - **Matching of 8cm as reference for 20cm**
- **Software could be tested by others than the developers of the software à information about usability.**
- **Feedback from testers.**
- **Understand and formulate needs (user requirements).**
- **Ideas for future use of DIM.**
- **Follow-up products**
    - **Building LoD3+**
    - **Forestry**
    - **Visualization**
- **Variation of flight parameters.**
- **Which channel for which application/objects/…?**

Threats:

- **The results represent only one snapshot of a continuous process.**
- **Not using the results correctly.**
- **Different processing adversely affects the results.**
- **Need to maintain impartiality.**
- **No continuation of the test.**
- **Everything is voluntary work.**
- **Visibility is missing.**
- **The results might be misinterpreted.**
- **The results might be used to decide which software to buy.**
- **Demand for different overlaps.**
- **Vendors with bad results.**
- **“Black box” vs. complex coding.**
- **Lack of participation (other tools).**
- **What can data providers/processers do in future?**
- **“Intuitive ranking” due to “much red” in the comparison of the products.**
- **Nobody might be interested in one year.**