



Working Group on Laser Data Acquisition

**ISPRS Congress, Amsterdam
22.07.2000**

Working Group on Laser Data Acquisition



Goals of the Working Group

- **to look for the requirements to laser scanner data within the "map making authorities",**
 - ◆ **e.g. surveying and mapping agencies, telecommunication companies, foresters, hydrogeologists and so on;**
- **Questionnaire**
- **Second phase test flights by the companies offering laser data**

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The Questionnaire

- **General Information**
 - ◆ of the Organisation
 - ◆ on the Use of Laser Data
- **Information on Users of**
 - ◆ Digital Surface Models
 - ◆ derived DEM
 - ◆ 3D-City models derived from laser scanner data
 - ◆ laser data for engineering and special mapping/modelling tasks

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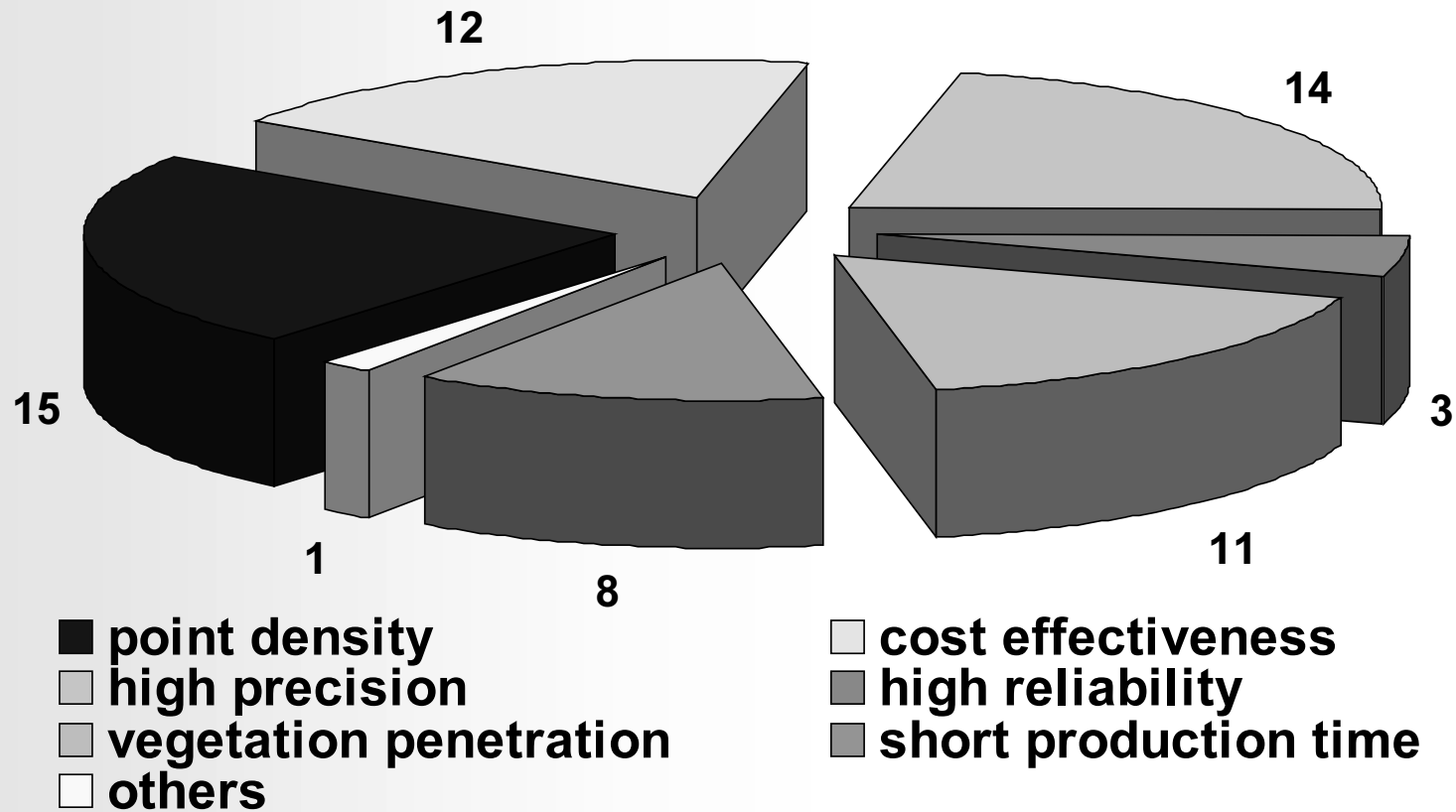
Basic Statistic

- The questionnaire was sent to
 - ◆ about **300 addresses** in
 - ◆ **32 different countries of Europe.**
- **79 questionnaires were answered, return ratio of about 27 %.**
 - ◆ **40 organisations are not using laser data yet,**
 - ◆ **21 organisations are testing laser data,**
 - ◆ **18 organisations are already using laser data in production.**

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Reasons for Usage



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The typical user of Laser Data is

- a mapping agency with
- more than 300 employees, using Laser Data for
- the derivation of DTM because of
 - ◆ high point density,
 - ◆ cost effectiveness and
 - ◆ high precision.

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Why A Test Flight

- Documenting quality, suitability and capabilities of the technique for different surveying tasks
- Topics of interest are:
 - ◆ DEM generation in wooded and/or urban areas,
 - ◆ Interpretation
 - ◆ 3D city models
 - ◆ Orthophoto generation
- Perhaps: result used as reference for future standards and recommendations

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The Test Field

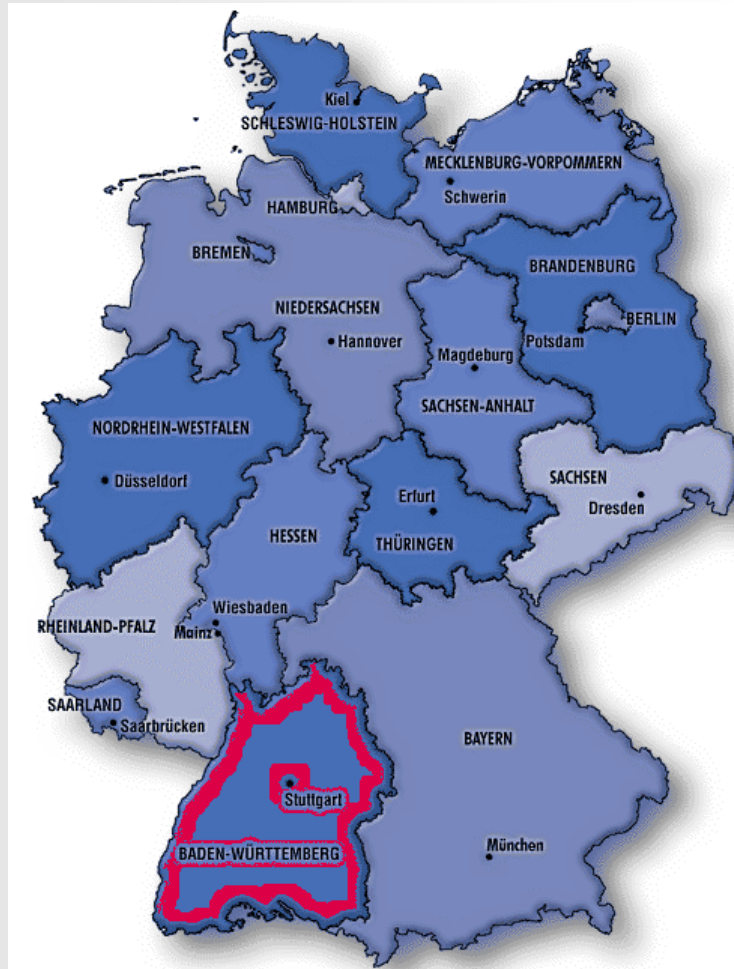
- Test field should satisfy several different types of applications
 - open fields,
 - forests,
 - dense city areas.
 - power lines,
 - water surfaces and
- Absolute accuracy of the systems are to be evaluated
- Checkpoints in the test field must be of very high quality
- Photogrammetric data is not of enough quality for this purpose.

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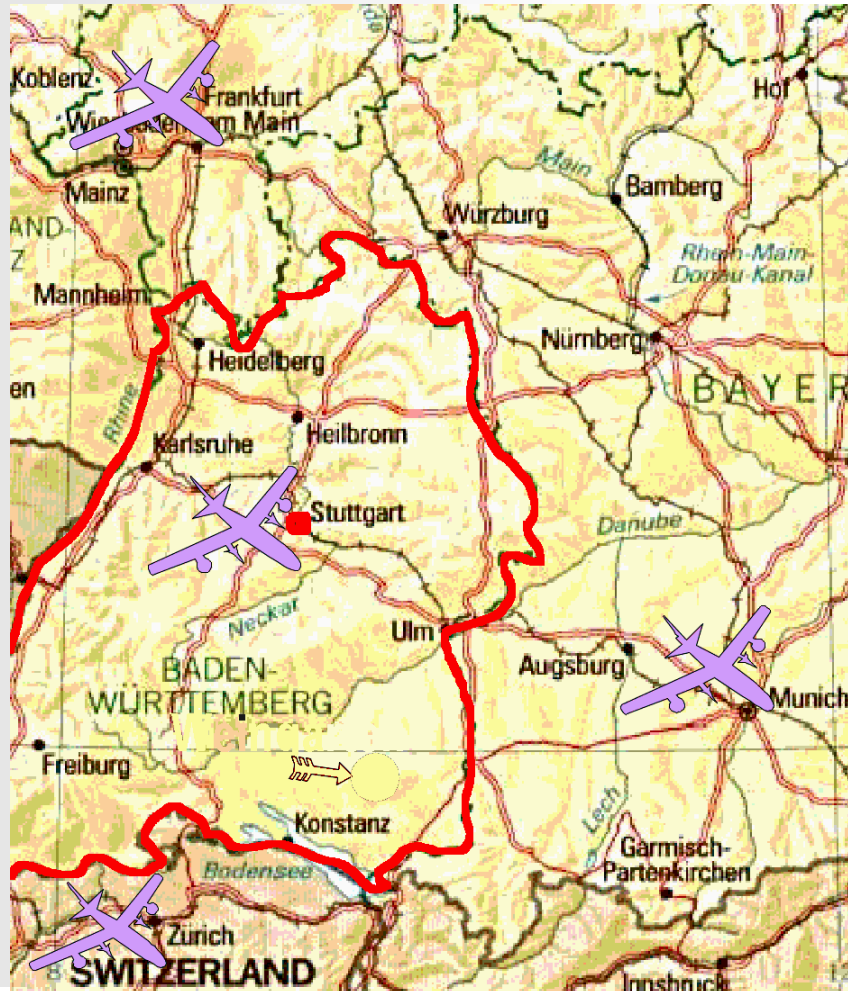
The test field

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The test field

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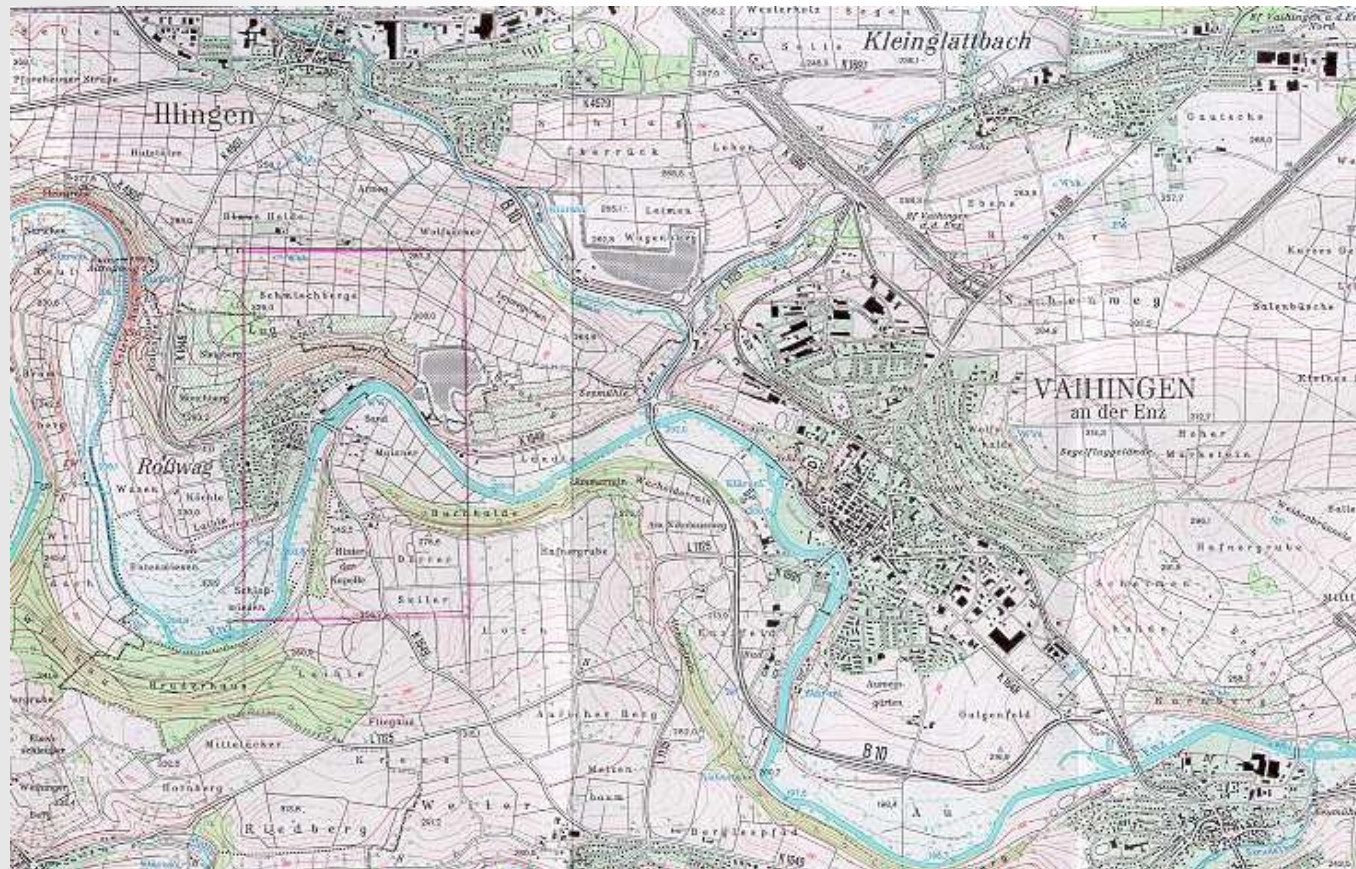


The test field

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The Vaihingen test field



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Test Flight – The Companies

- **Invitation sent out to 15 companies all over Europe**
- **The project does not intend to be a competition between different systems**
- **We cannot offer any financial support except a small “gesture of goodwill”**
- **We got 3 different data sets**

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Data Sets

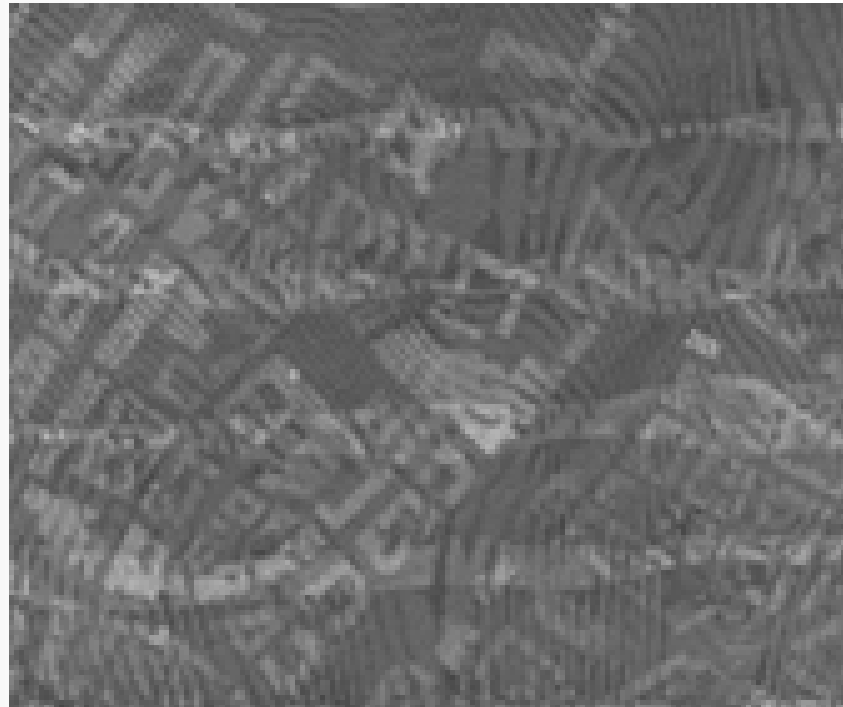
- **We have data sets from**
 - ◆ Eurosense
 - ◆ Fotonor
 - ◆ TopoSys
- **Will be distributed within the Working Group**
- **Also available to interested research institutions**

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First data set

- **Fotonor**
 - ◆ **Stuttgart City**



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Final Workshop

- **The results of the investigations will be presented in the final Workshop of the WG**
- **The Workshop will take place 1st to 3rd March 2001 in Stockholm.**
- **It is a combined Workshop with the Working Group on Radar Data**
- **For more details look at the OEEPE home page: www.oeepe.org**
- **Or take a flyer - it is there - on the desk !**

