INPHO TRAINING COURSE CATALOG
Instructor-led and web-based training

Version 2.9
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## Overview of available trainings

<table>
<thead>
<tr>
<th>Type</th>
<th>Item</th>
<th>Short description</th>
<th>To be used for</th>
<th>Order</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Onsite</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Classroom</td>
<td>ITR-inp-110-dd &amp; ITR-inp-500-dd &amp; ITR-inp-610-dd or ITR-inp-600-dd</td>
<td>Inpho onsite training incl. travel time and expenses</td>
<td>MATCH-AT; MATCH-3DX; MATCH-T DSM; DTMaster; OrthoMaster; OrthoVista; SCOP++; TopDM; UASMaster</td>
<td>Quote/PO</td>
</tr>
<tr>
<td>Demostration</td>
<td>ITR-inp-810-dd &amp; ITR-inp-500-dd &amp; ITR-inp-610-dd or ITR-inp-600-dd</td>
<td>Inpho System Onsite Demonstration incl. travel time and expenses</td>
<td>Inpho SW</td>
<td>Quote/PO</td>
</tr>
<tr>
<td><strong>In-house</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Classroom</td>
<td>ITR-inp-120-dd</td>
<td>Inpho in-house training day</td>
<td>MATCH-AT; MATCH-3DX; MATCH-T DSM; DTMaster; OrthoMaster; OrthoVista; SCOP++; TopDM; UASMaster</td>
<td>Quote/PO</td>
</tr>
<tr>
<td>Demostration</td>
<td>ITR-inp-820-dd</td>
<td>Inpho System In-house Demonstration Day</td>
<td>Inpho SW</td>
<td>Quote/PO</td>
</tr>
<tr>
<td><strong>Data processing</strong></td>
<td>ITR-inp-400-dd</td>
<td>Inpho Data Processing Day</td>
<td></td>
<td>Quote/PO</td>
</tr>
<tr>
<td><strong>Online</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Classroom</td>
<td>ITR-inp-130-dd</td>
<td>Inpho Trainer led personal online classroom training.</td>
<td>MATCH-AT; MATCH-3DX; MATCH-T DSM; OrthoMaster; OrthoVista; SCOP++; UASMaster</td>
<td>Quote/PO</td>
</tr>
<tr>
<td>self-paced</td>
<td>Learning center line item only</td>
<td>OrthoMaster - Online training</td>
<td>OrthoMaster - Online training</td>
<td><a href="http://learn.trimble.com">http://learn.trimble.com</a></td>
</tr>
<tr>
<td></td>
<td>Learning center line item only</td>
<td>OrthoVista - Online training</td>
<td>OrthoVista - Online training</td>
<td><a href="http://learn.trimble.com/lms/">http://learn.trimble.com/lms/</a></td>
</tr>
<tr>
<td>group</td>
<td>Learning center line item only</td>
<td>UASMaster - Online Group training</td>
<td>UASMaster - Online Group training</td>
<td><a href="http://learn.trimble.com/lms/">http://learn.trimble.com/lms/</a></td>
</tr>
<tr>
<td><strong>Group</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Classroom</td>
<td>Learning center line item only</td>
<td>Inpho classroom group training.</td>
<td>Learning center bookings</td>
<td><a href="http://learn.trimble.com/lms/">http://learn.trimble.com/lms/</a></td>
</tr>
</tbody>
</table>

Above table considers day rates only. Hourly rates are available on request.
Training Format

Classroom training (instructor-led)

All instructor-led classes are held in English or German, unless arranged otherwise with the instructor. Licenses for all the relevant software will be provided by Trimble for the duration of the course. Instructor-led classroom training may take place directly at the customers’ facilities (on-site) or at a Trimble facility specified by the trainer (in-house).

<table>
<thead>
<tr>
<th>Format</th>
<th>Description</th>
<th>Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard classroom training</td>
<td>Classroom training is a cost effective option, where up to 5 participants have the same or similar training needs.</td>
<td>Delivering classroom training programs at your premises will ensure minimum interruption to your business day, save you money on travel and hotel accommodations and provide the training to your staff in familiar surroundings.</td>
</tr>
</tbody>
</table>

**Costs**

<table>
<thead>
<tr>
<th>Format</th>
<th>Benefits</th>
<th>Additional Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Onsite (ITR-inp-110-dd &amp; ITR-inp-500-dd &amp; ITR-inp-600-dd or ITR-inp-610-dd)</td>
<td>The Trimble trainer travels to the customers’ facility and provides training on-site. Up to 5 people can attend the training.</td>
<td>Costs to be quoted in addition to the training costs:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Travel days to and from training (ITR-inp-500-dd)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Travel and accommodation costs (car, train, flight, additional extra costs) – to be estimated before quote is provided. (ITR-inp-600-dd)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Preferable use (ITR-inp-610-dd) in your order, where travel expenses are based on real costs. To be invoiced after the training.</td>
</tr>
<tr>
<td>In-house (ITR-inp-120-dd)</td>
<td>Cost-effective, as no travel expenses for trainer have to be included. Optimal training environment. Trainees travel on their own expenses. Limited to maximum of 5 participants.</td>
<td>No additional costs.</td>
</tr>
</tbody>
</table>

**Classroom – Basic**

Order ID: ITR-inp-120-dd or (ITR-inp-110-dd & ITR-inp-500-dd & ITR-inp-600-dd or ITR-inp-610-dd)

The instructor-led in-house or onsite training covering basic topics of modules is the standard training. The detailed training content and number of days is explained for each module below.
Classroom – Advanced
Order ID: ITR-inp-120-dd or (ITR-inp-110-dd & ITR-inp-500-dd & ITR-inp-600-dd or ITR-inp-610-dd)
The instructor-led in-house or onsite training of advanced topics is an individual training based on customer needs and requirements. There is no standard material available and trainers are focusing on the client’s individual requests and data sets. Depending on the provision of data sets, parts of the training time might be used for trainer preparation. Example: Client purchased 2 advanced training days, but the processing of the data requires ½ day. Then the remaining training time would be 1 ½ days.

Web-based Training (instructor-led)
The instructor-led web-based training consists of 2 courses: online classroom and online advanced training. Both courses are blended courses and include interaction with the trainer, but also self-study or preparation of the trainer. Please note that the Instructor-led web-based training is only available for products requiring not more than 2 days of standard classroom trainings and will not include stereo-related topics and functions (due to missing hardware support in a web-based session).

Online Classroom Group Training
Order ID: Online registration and ordering via http://learn.trimble.com/lms/
The online classroom group training is a web-based group training including trainer-led sessions with theoretical presentations and demonstrations as well as offline hands-on training by the participants. This course provides basic knowledge and handles available Trimble demo data. All instructor-led web-based courses are held in English. Currently, this type of online group training is only available for UASMaster.

<table>
<thead>
<tr>
<th>Format</th>
<th>Description</th>
<th>Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trainer-led</td>
<td>The web-based trainer-led course is a cost effective option, where the trainer provides theoretical information, workflow descriptions and is demonstrating the software. The course is open to participants from different end-users.</td>
<td>Fits conveniently into your workday as it is scheduled 2h per day, over a 4 day period.</td>
</tr>
<tr>
<td>Self-study</td>
<td>Offline self-study by each participant.</td>
<td>Allows practicing, gain own experience, solve exercises provided by the trainer and ask questions on the next training day.</td>
</tr>
</tbody>
</table>

This Online Classroom group training will be offered on fixed training dates once every 6 weeks, see example below:

<table>
<thead>
<tr>
<th>Time</th>
<th>Coverage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Start, 8am</td>
<td>APAC, Africa and Europe</td>
</tr>
<tr>
<td>Week 6, 4pm</td>
<td>Americas. Africa and Europe</td>
</tr>
<tr>
<td>Week 12, 8am</td>
<td>APAC, Africa and Europe</td>
</tr>
<tr>
<td>Week 18, 4pm</td>
<td>Americas. Africa and Europe</td>
</tr>
<tr>
<td>...</td>
<td>...</td>
</tr>
</tbody>
</table>
Trainer Led Online classroom Personal Basic

Order ID: ITR-inp-130-dd

The online web-based personal trainer-led basic training is an alternative to the classroom training. It includes online trainer-led training sessions, theoretical presentations and demonstrations as well as offline hands-on training by the participant. This course provides basic knowledge and handles available Trimble demo data. This course is exclusively for one customer and can adopt the training speed and level of interaction depending on the individual requirements.

One training day is partitioned into 3x 2h plus 1x 1h sessions that are being held via webinar. The web-based personal training is limited to a maximum of 2 training days.

<table>
<thead>
<tr>
<th>Format</th>
<th>Description</th>
<th>Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trainer-led</td>
<td>The web-based trainer-led course is a cost effective option, where the trainer presents theoretical information, demonstrations as well as workflow descriptions. This course is an exclusive course for one company and does not allow other companies to join.</td>
<td>Fits conveniently into your workday as it includes only 2h per day, split in 4 sessions per purchased training day.</td>
</tr>
<tr>
<td>Self-study</td>
<td>Offline self-study by each participant.</td>
<td>Allows practicing, gain own experience, solve exercises provided by the trainer and ask questions on the next training day.</td>
</tr>
</tbody>
</table>

Online Classroom Personal Advanced

Order ID: ITR-inp-130-dd

The online advanced training is the follow-up course to the online classroom personal basic training. Successful participation of the basic training is required. The topic depends on the participant’s request and data provided by the customer. Therefore, the session is split into preparation time for Trimble and web-based training of the participant. The training environment is restricted to participants from a single customer company or organization.

<table>
<thead>
<tr>
<th>Format</th>
<th>Description</th>
<th>Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trainer preparation</td>
<td>The trainer will receive the customer’s data set and questions in advance and prepares the answers and the course as a result</td>
<td>Questions are answered by the trainer and are tailored to fit your needs</td>
</tr>
<tr>
<td>Web-based discussion</td>
<td>Direct interaction with the trainer who shows the result of the data processing and describes the processing steps and explains open questions.</td>
<td>See what you can expect with your own data sets and how to solve problems while discussing individual topics of interest.</td>
</tr>
</tbody>
</table>

Self-study Online Training

The online training is predominantly designed as self-study training. The courses provide theory and background information as well as detailed hands-on exercises. All online courses and webinars are held in English. Detailed product codes are listed in the online training items below.

- Online, 24/7: All courses are available via the Trimble Learning Center: [http://learn.trimble.com/lms/](http://learn.trimble.com/lms/)
- “Office hours” once per week: If you need help on one of the training topics or exercises, write to [imaging_training@trimble.com](mailto:imaging_training@trimble.com) to get log-in information for the weekly web-session together with other users and a Trimble Trainer.

<table>
<thead>
<tr>
<th>Format</th>
<th>Description</th>
<th>Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-study</td>
<td>The online courses are self-study and include theory/introduction as well as videos and detailed, interactive hands-on exercises teaching a particular topic.</td>
<td>Fits perfectly in your workday, without being away from your desk. The participant can flexibly decide when to work on the exercises, 24/7.</td>
</tr>
<tr>
<td>Office hours</td>
<td>Register for one of the weekly open web-sessions. An experienced Inpho trainer answers questions about the training content and you can get help with the exercises from an experienced Inpho trainer.</td>
<td>Get in direct contact with an experienced trainer. Meet other users and get networked by participating at an open session.</td>
</tr>
</tbody>
</table>

**Training registration and fee**

You find the web-based courses in the Trimble Learning Center ([http://learn.trimble.com/lms/](http://learn.trimble.com/lms/)). Please register for a course and follow the payment instructions. All courses and the webinar will be accessible after payment is received and approved.

**Travel expenses and travel day costs**

Each onsite training or service has to be booked together with a travel expense item and travel day costs.

**ITR-INP-500-DD**

This item is covering Trimble’s costs for a trainer when traveling to the dealer or customer and back. Based on how many days or hours a trainer has to travel either 1 day or max 2 days have to be quoted and ordered.

**ITR-INP-600-DD**

Travel expenses based on estimated costs. These expenses are covering Trimble’s costs for flight, hotel, taxi, rental car or public transportation. No additional cost for e.g. food is to be considered. When offering this item then the training manager or trainer is to be consulted before the quote is provided to estimate the costs. A buffer has to be considered in case flights have to be changed in the last minute or booked hotels have to be cancelled with canceling fee.

**ITR-INP-610-DD**

Travel expenses based on real costs. To be invoiced after the training is provided. These expenses are covering Trimble’s costs for flight, hotel, taxi, rental car or public transportation. No additional cost for e.g. food is to be considered. Trimble will try to keep flight and hotel costs reasonably low and therefore the dealer or customer can expect that we try not to ask for more than what costs we really have. Customer and dealer can advise also the hotel we should select.
Quote or Order example

**Quote or order for training with estimated travel expenses**

<table>
<thead>
<tr>
<th>Oracle ID</th>
<th>Description</th>
<th>Unit Price in USD/Euro</th>
<th>Qty</th>
<th>Total in USD/Euro</th>
</tr>
</thead>
<tbody>
<tr>
<td>ITR-INP-110-DD</td>
<td>Training for maximum 5 participants. See training course catalog for more details concerning content and number of days to offer. Cost per day. Price is without tax. Local tax may be applied. Onsite travel expenses and travel day costs are offered additionally.</td>
<td>See price list</td>
<td>?</td>
<td></td>
</tr>
<tr>
<td>ITR-INP-500-DD</td>
<td>Travel time in days trainer needs to travel to customer site and back home. Price is without tax. Local tax may be applied.</td>
<td>See price list</td>
<td>?</td>
<td></td>
</tr>
<tr>
<td>ITR-INP-600-DD</td>
<td>Travel expenses (air ticket, rental car, hotel, ...) based on estimated costs. This item needs to be offered together with onsite training and travel time per day or hour. Price is without tax. Local tax may be applied.</td>
<td>Please contact <a href="mailto:imaging_support@trimble.com">imaging_support@trimble.com</a> to receive the estimates for the travel expenses.</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

**Grand Total**

*Note: No discount is possible on training items.*

**Quote or order for training with travel expenses based on real costs**

<table>
<thead>
<tr>
<th>Oracle ID</th>
<th>Description</th>
<th>Unit Price in USD/Euro</th>
<th>Qty</th>
<th>Total in USD/Euro</th>
</tr>
</thead>
<tbody>
<tr>
<td>ITR-INP-110-DD</td>
<td>Training for maximum 5 participants. See training course catalog for more details concerning content and number of days to offer. Cost per day. Price is without tax. Local tax may be applied. Onsite travel expenses and travel day costs are offered additionally.</td>
<td>See price list</td>
<td>?</td>
<td></td>
</tr>
<tr>
<td>ITR-INP-500-DD</td>
<td>Travel time in days trainer needs to travel to customer site and back home. Price is without tax. Local tax may be applied.</td>
<td>See price list</td>
<td>?</td>
<td></td>
</tr>
</tbody>
</table>
Travel expenses (air ticket, rental car, hotel, …) based on real costs. This item needs to be offered together with onsite training and travel time per day or hour. Travel expenses are available after the training only and will be then separately charged.

| ITR-INP-610-DD | Travel expenses are available after the training only and will be then separately charged. | 1 | 1 |

**Grand Total**

*Note: No discount is possible on training items.*

**General Training Prerequisites**

Training attendees are responsible for providing computer hardware that meets the Inpho system requirements:

- 64-bit operating system
- Windows 7 or higher
- A minimum of 16GB RAM but we recommend 32GB or higher
- Enough free disk space to handle input and output data set including temporary files (dependent on size of project but min. 512 GB)
Inpho Classroom Training

The section below describes the instructor-led face-to-face Classroom training.

Overview

We offer classroom training for all Inpho products. In this brochure training courses for the following products are described:

- Match-AT – 2 days
- MATCH-3DX – 1 day
- Match-T DSM – 1 day
- DTMaster – 1 day
- SCOP++ – 2 days
- TopDM – 1 day
- OrthoMaster – 1 day
- OrthoVista – 2 days
- UASMaster – 2 days

If you are interested in receiving training on any of our other products, please contact us for details at: imaging_training@trimble.com
MATCH-AT's aerial triangulation processing workflow

Overview
This two days training course teaches the complete workflow of how to set up and process the fully automated aerial triangulation with Match-AT, from the basics up to processing parameters, and post processing. You will work on sample data and, if available, use a smaller subset of your own data.

Recommended prerequisites: Photogrammetric background

Content
- Project setup
- Aerial triangulation theory
- Camera specification and calibration in detail
- Setting the correct parameters for the automated aerial triangulation process
- Analyzing aerial triangulation results
- Error correction (post-processing)

Format and price
Two days instructor-led training for up to 2 participants; necessary software licenses will be provided; Price upon request (imaging_training@trimble.com)

How to proceed after training:
- Self-study: We recommend to learn more about cameras, GNSS/IMU and triangulation in general
- Customized Advanced Training day: After you have worked with MATCH AT for some time and especially before you are going to process larger projects, we recommend to add another day of customized training, please contact us to discuss possibilities
Match-3DX

Generating dense point clouds with Match-3DX

Overview

This one-day training teaches how to automatically create dense point clouds from aerial image blocks. You will be guided through the complete workflow and get theory and background information about dense point cloud generation with True-Ortho products.

Recommended prerequisites:
- Photogrammetric background
- Availability of oriented aerial images
- Know how to use DTMaster for QA

Content
- Introduction to MATCH-3DX workflow
- What is a DTM/DSM (theory)?
- Theory on MATCH-3DX algorithms
- Setting parameters for processing
- Data post-processing of MATCH-3DX point cloud data
- How to do QA/QC? Using DTMaster
- Additional parameters (match.status, batch parameters)

Format and price

One-day instructor-led training for up to 5 participants; necessary software licenses will be provided; Price upon request (imaging_training@trimble.com)

How to proceed after training:
- Customized Advanced Training day: Learn about special adjustments, if you are having special cases, like larger areas of desert or forest, or if working with very large data sets
Generating DTM/DSM with Match-T DSM

Overview

This one-day training teaches how to automatically create digital terrain and surface models from aerial or satellite image blocks. You will be guided through the complete workflow and get theory and background information about DTM/DSM generation.

Recommended prerequisites:

- Photogrammetric background
- Availability of oriented aerial images
- Know how to use DTMaster for QA

Content

- Introduction to MATCH-T DSM workflow
- What is a DTM/DSM (theory)?
- Theory on MATCH-T DSM algorithms
- How to handle ‘Area Definitions’
- Setting parameters for processing
- Data post-processing of MATCH-T DSM point cloud data (DTMToolKit)
- How to do QA/QC? Using DTMaster
- Additional parameters (match.status, batch parameters)

Format and price

One-day instructor-led training for up to 5 participants; necessary software licenses will be provided; Price upon request (imaging_training@trimble.com)

How to proceed after training:

- Customized Advanced Training day: Learn about special adjustments, if you are having special cases, like larger areas of desert or forest, or if working with very large data sets
DTMaster

Efficient DTM quality control and editing with DTMaster

Overview

In this one-day training you will learn how to do quality control and editing of digital terrain models. The training covers lessons about data visualization, checking, editing and digitizing 3D vector data of terrain models.

Recommended prerequisites: General knowledge about terrain models

Content

- Introduction to the DTMaster workflow
- Going through the complete workflow step by step
- Import and export of vector data
- Tools to create points and lines
- Data display and visualization with aerial images, orthophotos
- Working with files and layers
- Details on measurement and editing functionality
- Quality Assurance and Quality Control

Format and price

One-day instructor-led training for up to 5 participants; necessary software licenses will be provided; Price upon request (imaging_training@trimble.com)

How to proceed after training:

- Processing final terrain model
Efficient LiDAR quality control and editing with DTMaster

Overview

In this one-day training you will learn how to do quality control and editing of Laser Data. The training covers lessons about data visualization, checking, editing, and classification of LiDAR point clouds.

Recommended prerequisites: General knowledge about terrain models

Content

- Introduction to the DTMaster workflow
- Going through the complete workflow step by step
- Data handling of very large point clouds in DTMaster (DTMToolKit)
- Details on measurement and editing functionality
- Reclassification of LiDAR points
- Quality Control and Quality Assurance of LiDAR data
- Data display and visualization with aerial images, orthophotos
- Continuing post-processing

Format and price

One-day instructor-led training for up to 5 participants; necessary software licenses will be provided; Price upon request (imaging_training@trimble.com)

How to proceed after training:

- Processing final terrain model
Generation and Application of DTMs

Overview

This two days training teaches how to create digital terrain and surface models from data (points, lines) coming from LiDAR, photogrammetry or other sources. You will be guided through the complete workflow and get theory and background information about DTM/DSM generation and numerous DTM applications like contouring, hill-shading and slope analysis et al.

Recommended prerequisites:

- Know how to use DTMaster for data editing and QA

Content

- Introduction to SCOP++ workflow, SCOP++ modules
- Theory on DTM interpolation methods
- Structure of a SCOP++ DTM
- Setting parameters for DTM processing and handling
- DTM Applications
- Hierarchic robust LiDAR filtering

Format and price

Two days instructor-led training for up to 5 participants; necessary software licenses will be provided; Price upon request (imaging_training@trimble.com)

How to proceed after training:

- Customized Advanced Training day: Learn about special applications, use own data sets for processing, learn how to use the batch command language.
TopDM

Terrain Data and DTM Management

Overview
This one-day training teaches how to manage countrywide terrain data and digital terrain models (DTMs) in a relational data base in an easy way.

Recommended prerequisites:
- None

Content
- Introduction to TopDM data structure
- The three parts of TopDM: Georeferencing, Data management and DTM management
- Data selection and export (LiDAR filter, points, lines ...)
- DTM selection and export parameters/tools (merge, convert, split, thin out ...)
- Metadata
- Coordinate Transformations

Format and price
One-day instructor-led training for up to 5 participants; necessary software licenses will be provided; Price upon request (imaging_training@trimble.com)

How to proceed after training:
- Customized Advanced Training day: use own data sets, learn how to use the batch command language.
Generating orthophotos with OrthoMaster

Overview

This one-day training shows you how to process orthophotos with OrthoMaster. You will learn how to navigate and display data as well as details about processing parameters for automated processing.

Content

Introduction to OrthoMaster
- Get an overview of OrthoMaster
- Learn about orthophoto rectification
- Go through a basic exercise

Data display and activation
- Learn about zooming and navigation
- Understand data display options in OrthoMaster

Orthophoto generation
- How to activate data for processing
- Learn about Terrain Models
- How to generate Ortho Areas
- How to process Orthophotos
Generating orthomosaics with OrthoVista

Overview
The two days OrthoVista “Tools + Functionality” course explains theory and methods and guide you through hands-on exercises to be able to create orthomosaics. You will also learn about the functionality of the Seam Editor and the Radiometrix editor.

Prerequisites and recommendations:
- General photogrammetric knowledge
- Orthophoto should be available

Content

Introduction OrthoVista

Navigation, Display & more
- Learn how to use the display options
- Learn about navigation options

Project Handling
- Get an introduction to OrthoVista project handling
- Learn how to work with OrthoVista project files
- Learn about file management

Project Preferences
- Get an introduction to OrthoVista project preferences
- Learn about general and parallel processing

Processing Overview
- Get an overview over OrthoVista processing
- Understand image adjustment “Global Tilting”
- Understand mosaic adjustment “Feature Detection”
- Learn how to define the output selection

Working with Seam Editor

Working with Radiometrix Editor
Processing UAS data with UASMaster

Overview
The two day face-to-face UASMaster course introduces users to UAS theory and methods. Additionally, the course guides you through hands-on exercises to process UAS sample data from project setup to orthophoto mosaics.

Prerequisites and recommendations:
- Basic photogrammetric knowledge

Content

*Introduction to UASMaster*

*UAS ApplicationsMaster*
- Understand the differences between UAV and Photogrammetric Projects
- Get an introduction to UAS ApplicationsMaster
- Learn how to setup a project

*Georeferencing - Measure*
- Learn how the Tie Point Extraction works
- Get an introduction to the UAS Measurement
- Understand the Point Tab and the Photo Tab

*Georeferencing - Analysis*
- Learn about Camera Calibration

*DSM generation and Editing*
- Learn about the DSM / DTM Generation
- Learn about the Preferences and Display options
- Get an introduction to the UAS Edit tool
- Understand the Terrain Tab
- Understand the Point and Line Tools

*Generation of OrthoMosaic*

Format and price
Two days instructor-led training for up to 5 participants; necessary software licenses will be provided; Price upon request (imaging_training@trimble.com)
How to proceed after training:

- Continue with a one-day advanced online training as instructor-led web-based course. The advanced course handles then own data and answers specific questions from the users.

Inpho instructor-led web-based training

Personal Online Training (Basic or Advanced)

Order ID: ITR-inp-130-dd

Processing with Inpho Software

Overview

The online Classroom Training is available for the modules MATCH-AT, MATCH-T DSM, DTMaster, OrthoMaster and OrthoVista. The module UASMaster is specified more in detail below. Depending on the number of training days per module, the training agenda will be defined. Please note that the online classroom training is limited to 2 days only. If requested otherwise, please contact us at imaging_training@trimble.com.

Modules involving stereo viewing capabilities will have limited training. To allow a training of functions including stereo viewing, an onsite or in-house training is required.

If processing of own data sets is required, the complete training time might be partitioned into offline data preparation from the trainer and online training time.

Prerequisites and recommendations:

- Basic photogrammetric knowledge

Content

Content depends on training modules. See detailed description for each module under the classroom training section.

Format and price

Personal Instructor-led training for up to 5 participants; necessary software licenses will be provided. Price upon request (imaging_training@trimble.com).

How to proceed after training:

Continue with a one-day advanced online training as instructor-led web-based course. The advanced course handles then own
Processing UAS data with UASMaster - Basic

The UASMaster web-based course introduces users to UAS theory and methods. Additionally, the course guides you through hands-on exercises to process UAS sample data from project setup to orthomosaics.

Prerequisites and recommendations:
- Basic photogrammetric knowledge
- Download and installation of software and sample data

Content

The online classroom training contains 4x2h sessions and is conducted from Monday to Thursday. Please note that the basic training class uses the standard UASMaster training data set only. Additionally there are four videos introducing the software which participants are strongly recommended to watch in advance.

Introduction to UASMaster

UAS ApplicationsMaster

- Differences between UAV and Photogrammetric Projects
- UAS ApplicationsMaster
- Project Setup

Georeferencing - Measure

- Tie Point Extraction
- UAS Measurement
- Point Tab
- Photo Tab

Georeferencing - Analysis

- Camera Calibration
- LOG File
- Preferences – Graphical Check Tools
- Statistics
- Stereo Quality Check

DSM generation and Editing

- DSM / DTM Generation
- Preferences and Display options
- UAS Edit
- Terrain Tab
- Point and Line Tools

OrthoMosaic Generation
**Training Layout**

### Daily Agenda:

<table>
<thead>
<tr>
<th>Time</th>
<th>Task</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 min</td>
<td>Introduction (day 1) / Review questions/exercise from previous day (day 2-4)</td>
</tr>
<tr>
<td>50 min</td>
<td>Theory</td>
</tr>
<tr>
<td>10 min</td>
<td>QA session / short break</td>
</tr>
<tr>
<td>50 min</td>
<td>Theory</td>
</tr>
<tr>
<td>10 min</td>
<td>QA session and provision of exercise of the day</td>
</tr>
</tbody>
</table>

### Schedule:

To see when the UASMaster online classroom training is offered please visit: [http://learn.trimble.com/lms/](http://learn.trimble.com/lms/)

### Format and price

Four days (4 x 2 hour sessions) instructor-led web-based group training, Registration, pricing information and dates are available through [http://learn.trimble.com/lms/](http://learn.trimble.com/lms/).

### How to proceed after training:

Continue with a one-day advanced online training as instructor-led web-based course. The advanced course handles their own data and answers specific questions from the users.
Processing own UAS data with UASM Master

Advanced online trainings are individual, customized trainings conducted via WebEx to single customers/dealers. For advanced trainings, individual data sets can be provided and questions can be asked that will be covered in the session. To allow the data to be processed in convenient time, the number of images in the sample block is limited to 50. The trainer needs to receive the data in advance. The trainer will do a processing and investigation of the data and provide all information as well as results during the web session.

These advanced training sessions are offered for all UASM Master related topics excluding features/topics involving stereo viewing and editing. The stereo viewing cannot be provided via WebEx and cannot be used with web based trainings. In situations where stereo editing is involved, an onsite or in-house training is required.

Advanced trainings are performed on request and not on a regular basis. These trainings include a fee for customers as well as for distribution partners. Note: Regular specific distribution partner trainings for advanced trainings are offered once a year free of charge.

Prerequisites and recommendations:

- Basic photogrammetric knowledge

Content

This 10h advanced online training discusses specific questions from the users and involves data sets from users to be processed. It is set up from 2 components:

- Processing of the data that takes place directly in the support group and covers 6h processing and investigation time
- Web session which is being split in 2x 2h sessions. During the web session the open questions are discussed and processed customer data is presented.
**Training Layout**

**Support office**
6h for data processing & investigation

**Web session**
2h including feedback about data processing and QA session

**Web session**
2h including feedback about data processing and QA session

**Format and price**

10h Training is split into an offline (processing and preparation from the trainer) and online (webinar with the client) component, Price upon request (imaging_training@trimble.com).
Inpho Online Training

Overview

Currently we have online courses for OrthoMaster and OrthoVista available.

**OrthoMaster ‘Tools + Functionality’**

For OrthoMaster one online course package is available. The course explains how to generate orthophotos.

**OrthoVista ‘Tools + Functionality I’**

For OrthoVista three online course packages (represented as buildings in the graphic below) are available.

- Learn all about creating orthophoto mosaics in the package ‘Tools + Functionality I’
- Learn how to edit seam lines in the package ‘Seam Editor’
- Learn how to enhance the histograms, color, saturation etc. by going through ‘Radiometrix Editor’ course package
OrthoMaster Online Courses

OrthoMaster “Tools + Functionality”

Overview

The OrthoMaster “Tools + Functionality” online course package starts with an introduction webinar, followed by three online courses. These courses explain theory and methods to guide you through hands-on exercises in order to create orthophotos.

Content

OrthoMaster Tools + Functionality Course Package: Watch this short introduction to the course package to understand content and structure of the online training

Course 1 “Introduction to OrthoMaster”:

• Get an overview of OrthoMaster
• Learn about orthophoto rectification
• Go through a basic exercise

Course 2 “Data display and activation”:

• Learn about zooming and navigation
• Understand data display options in OrthoMaster
• How to activate data for processing

Course 3 “Orthophoto generation”

• Learn about Terrain Models
• How to generate Ortho Areas
• How to process Orthophotos

Format and price

About five hours of self-study. Please order and register with the following link to the Trimble Learning Center: http://learn.trimble.com/lms/
OrthoVista Online Courses

OrthoVista “Tools + Functionality I”

Overview

The OrthoVista “Tools + Functionality I” online course package starts with an introduction webinar, followed by five online courses. The courses explain theory and methods and guide you through hands-on exercises to be able to create orthophoto mosaics.

Content

OrthoVista Tools + Functionality I Course Package: Watch this short introduction to the course package to understand content and structure of the online training

Course 1 “First Steps in OrthoVista”:

- Get an introduction to OrthoVista
- Learn about loading & unloading images
- Learn about loading & selecting a tile definition
- Execute the processing & review the results

Course 2 “Navigation, Display & more”:

- Learn how to use the display options
- Learn about navigation options

Course 3 “Project Handling”:

- Get and introduction to OrthoVista project handling
- Learn how to work with OrthoVista project files
- Learn about file management

Course 4 “Project Preferences”:

- Get an introduction to OrthoVista project preferences
- Learn about general and parallel processing
- Understand the background checking
- Know how to set display mapping

Course 5 “Processing Overview”:

- Get an overview of OrthoVista processing
- Understand image adjustment “Global Tilting”
- Understand mosaic adjustment “Feature Detection”
- Learn how to define the output selection
OrthoVista “Seam Editor”

Overview

The Seam Editor is part of OrthoVista and provides tools to edit seam lines.

Content

**OrthoVista Seam Editor Course Package:** Watch this short introduction to the course package to understand content and structure of the online training

**Course 1: First Steps in Seam Editor**

- Get an introduction to Seam Editor
- Learn the basics on how to use Seam Editor
- Learn how to edit the seam lines

Format and price

Self-study course included in OrthoVista Tools + Functionality I. Please order and register with the following link to the Trimble Learning Center: [http://learn.trimble.com/lms/](http://learn.trimble.com/lms/)
OrthoVista “Radiometrix Editor”

Overview

For the Radiometrix Editor, which is also part of OrthoVista, two courses are available online.

Content and Schedule

OrthoVista Radiometrix Editor Course Package: Watch this short introduction to the course package to understand content and structure of the online training

Course 1: “Introduction to Radiometrix Editor”
- Get an introduction to Radiometrix Editor
- Learn how to navigate and select
- Get an overview of the available tools
- Learn about other options

Course 2: “Radiometrix Tools in Detail”
- Get to know additional tools like: Histograms and color picker
- Understand the auto-gradation adjustment
- Learn how to manually adjust the gradation
- Learn how to adjust the intensity and contrast

Format and price

Self-study course included in OrthoVista Tools + Functionality I