

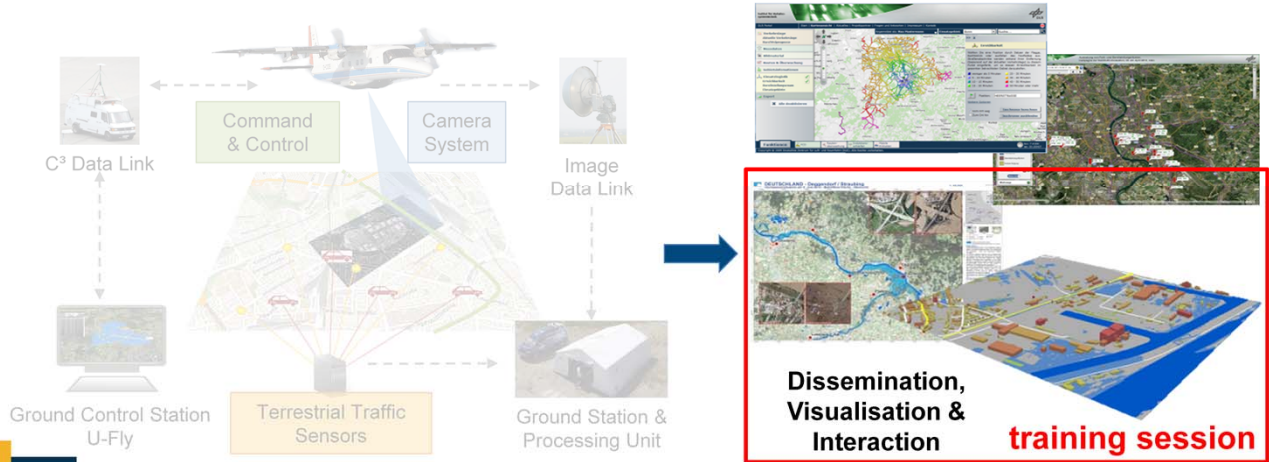


ZKI
HANDS-ON TRAINING

Elisa Schröter, Ralph Kiefl
10.04.2019 – The Hague

AIRBORNE AND TERRESTRIAL SITUATIONAL AWARENESS

BACKGROUND DLR SOLUTION



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Module: ZKI

DRIVER+ Project

ZKI OVERVIEW

MAIN FEATURES FOR TRIAL 4

DLR user Service ZKI (Center for Satellite based Crisis information)

- Provides information layers (e.g. actual water mask) and ready to use 2D / 3D maps
 - For large scale events
 - For professional responders
- Deployed in the response phase
 - ... to assess disaster extent
 - ... to support damage assessment
 - ... to contribute to COP (e.g. tools such as LCMS, Crisis Suite)
 - ... to support decision making (e.g. tools such as KeepOperational)

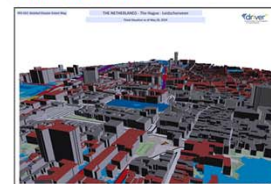
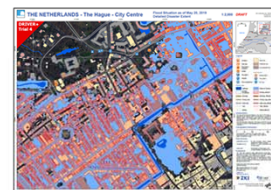
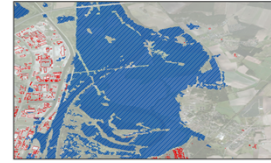


ZKI OVERVIEW

SERVICES & PRODUCTS FOR TRAIL 4

- Preparation of crisis related information
 - **water mask** derived from remote sensing data

In this Trial: simulated water mask, as if derived from aerial imagery and processed based on DLR user service ZKI processing facilities
- Web based Product Dissemination
 - OGC [WMS](#) / WFS **web services** for water mask
 - Download service for ready to use [map products](#)
- Generation of ready to use **maps**
 - 2D GeoPDF
 - 3D PDF



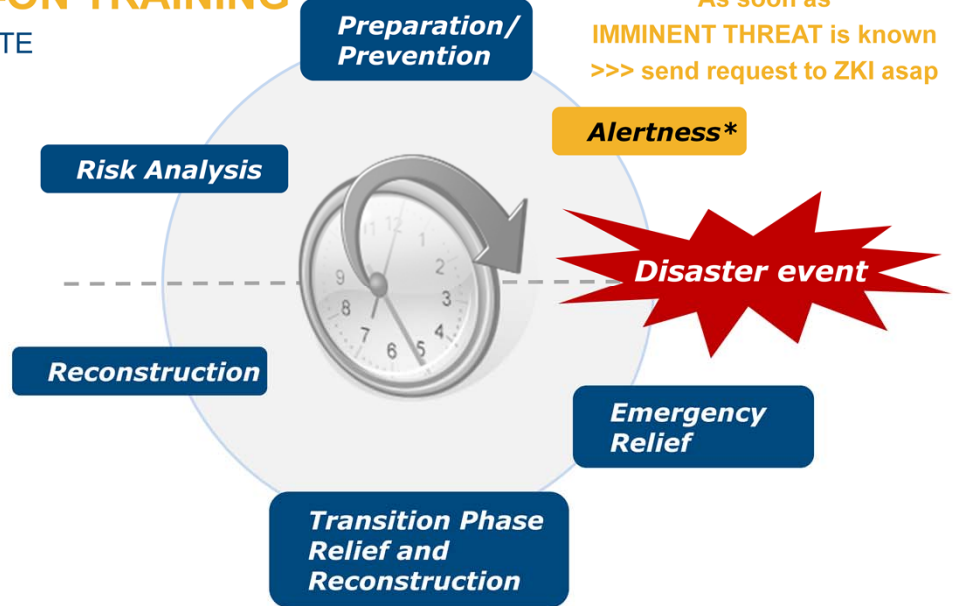
ZKI HANDS-ON TRAINING

CONTENT

- When and how to **activate ZKI** and receive mapping products
- Accessing **web services** for actual water masks
- Accessing and working with ZKI **2D GeoPDF map** documents
- Accessing and working with ZKI **3D PDF map** documents

ZKI HANDS-ON TRAINING

WHEN TO ACTIVATE



ZKI HANDS-ON TRAINING

HOW TO ACTIVATE

REQUEST EMAIL @

- **Who** activates (inquiring authority and contact person)
- Type of **event** (natural disaster / police investigation / ...)
- Product **type** (satellite imagery or aerial imagery / disaster extent analysis / ...)
- Product **format** (WMS / WFS layer for COP tools / map product)
- **Delivery** date (fast mode - as soon as possible - / date: ...)
- Area of interest (name of location)
- Additional comments/requests

PLEASE SEND THE REQUEST EMAIL TO **TRIAL EMAIL ACCOUNT „ZKI“**. IF YOU HAVE ANY QUESTIONS IN ADVANCE OR NEED CONSULTATION ON YOUR INQUIRY PLEASE CALL **+49 8153 28 44 33 88**

ZKI HANDS-ON TRAINING

ACCESSING **WEB SERVICES** FOR ACTUAL WATER MASKS

OGC Web Map Service (WMS): Viewing service

<https://www.opengeospatial.org/standards/wms>

- Used for visual overlay other layers in map applications (e.g. LCMS, Crisis Suite)
- Provides rendered and geo-registered images of geodata
- Supports different projections and file formats
- Request-Parameters: Layer, area of interest, size, image format, spatial reference

OGC Web Feature Service (WFS): Data service for vector data

<https://www.opengeospatial.org/standards/wfs>

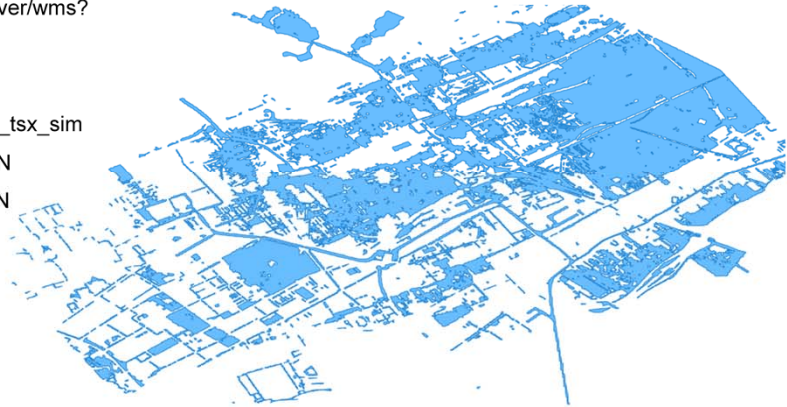
- Accessed for further geoprocessing (e.g. KeepOperational, GIS applications)
- Supports different projections and file formats
- Request-Parameters: Layer, area of interest, file format, spatial reference

ZKI HANDS-ON TRAINING

ACCESSING WEB SERVICES FOR ACTUAL WATER MASKS

<https://geoservice.dlr.de/eoc/zki/service/driver/wms?>

Service	WMS
Request	GetMap
Layers	driver:dryrun1_watermask_tsx_sim
AOI LL	4.2318027°E 51.962462°N
AOI UR	4.395028°E 52.113057°N
Image Width	951
Image Height	878
Spatial Reference	Geogr./ WGS84
Format	PNG



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PLEASE OPEN SHORTLINK: [HTTP://S.DLR.DE/250H](http://s.dlr.de/250H)

DRIVER+ Project

ZKI HANDS-ON TRAINING

ACCESSING WEB SERVICES FOR ACTUAL WATER MASKS

<https://geoservice.dlr.de/eoc/zki/service/driver/wms?>

Service	WMS
Request	GetMap
Layers	driver:dryrun1_watermask_tsx_sim
AOI LL	75572 442084
AOI UR	87017 458670
Frame Width	1024
Frame Height	768
Spatial Reference	28892 (Amersfoort / RD New)
Format	application/openlayers



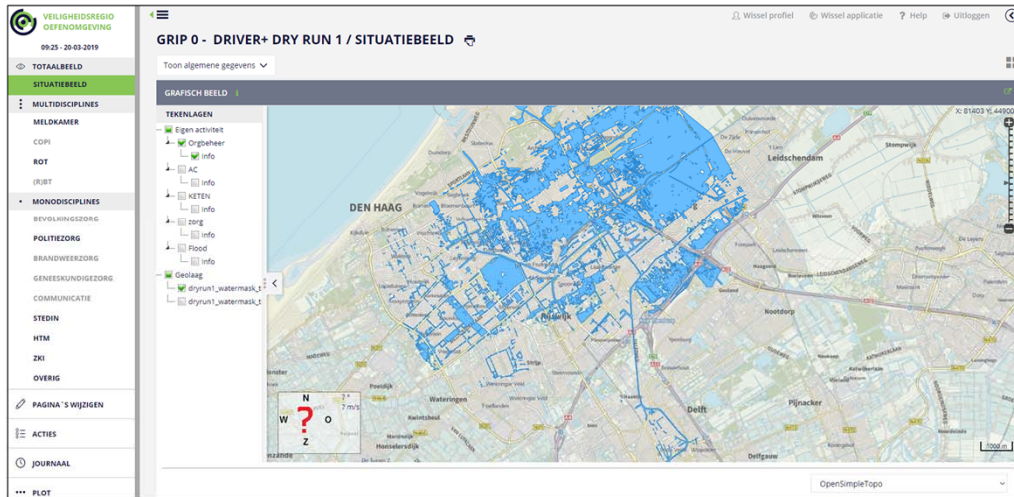
10

PLEASE OPEN SHORTLINK: [HTTP://S.DLR.DE/MH8C](http://s.dlr.de/mh8c)

DRIVER+ Project

ZKI HANDS-ON TRAINING

ACCESSING WEB SERVICES FOR ACTUAL WATER MASKS



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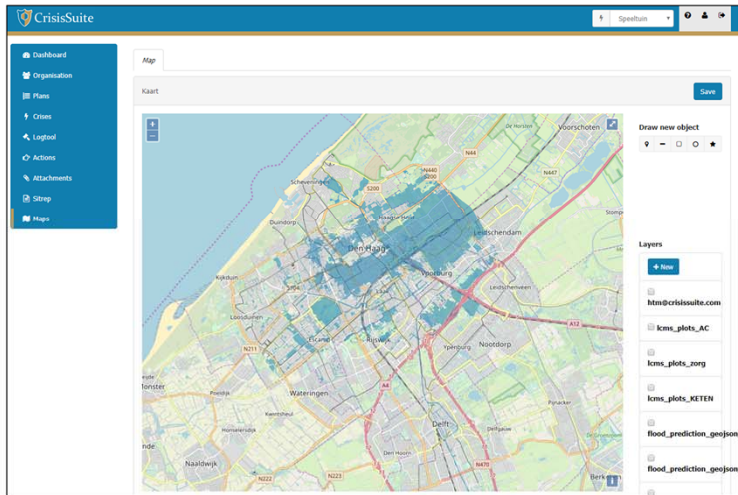
Demo watermask service layer displayed in LCMS

(image provided by TNO)

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ZKI HANDS-ON TRAINING

ACCESSING WEB SERVICES FOR ACTUAL WATER MASKS



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Demo watermask service layer displayed in CrisisSuite (image provided by MERLIN)

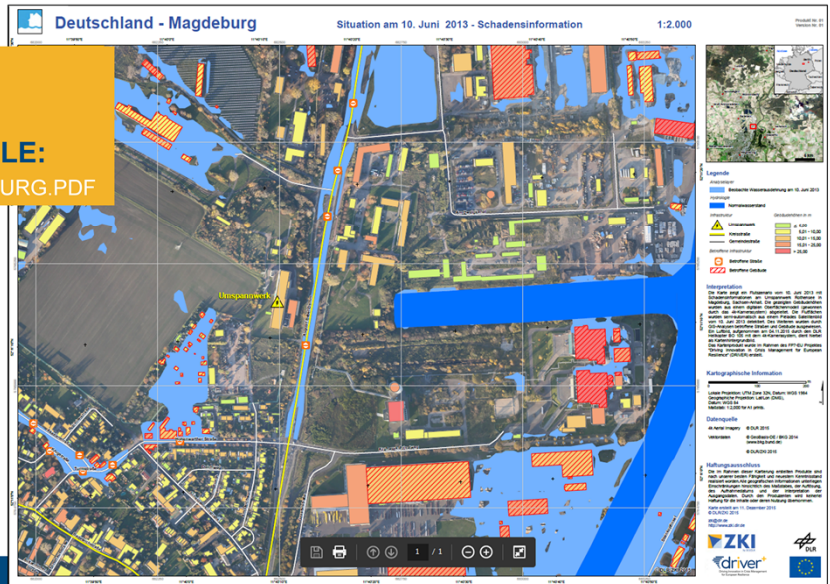
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ZKI HANDS-ON TRAINING

ACCESSING AND WORKING WITH ZKI 2D GEOPDF MAP DOCUMENTS

PLEASE USE SHORTLINK
HTTP://S.DLR.DE/2968
DOWNLOAD AND OPEN FILE:
DRIVER-EXP44_GEOPDF_MAGDEBURG.PDF

- Toggle map layers for custom map view
- Make measurements
- Make comments
- Access attribute information



DRIVER-Exp44_GeoPDF_Magdeburg.pdf - Adobe Acrobat Reader DC

File Edit View Window Help

Home Tools DRIVER-Exp44_Geo... x

Layers

- Magdeburg
- Umspannwerk Magdeburg
- Betroffene Straßen > 25m
- Straßen
- Betroffene Gebäude
- Gebäude
- Hochwasserlinie
- Gewässer
- Luftbild vom 04.11.2015
- Gitternetz
- Geographisch
- UTM32N

Deutschland - Magdeburg

Situation am 10. Juni 2013 - Schadensinformation

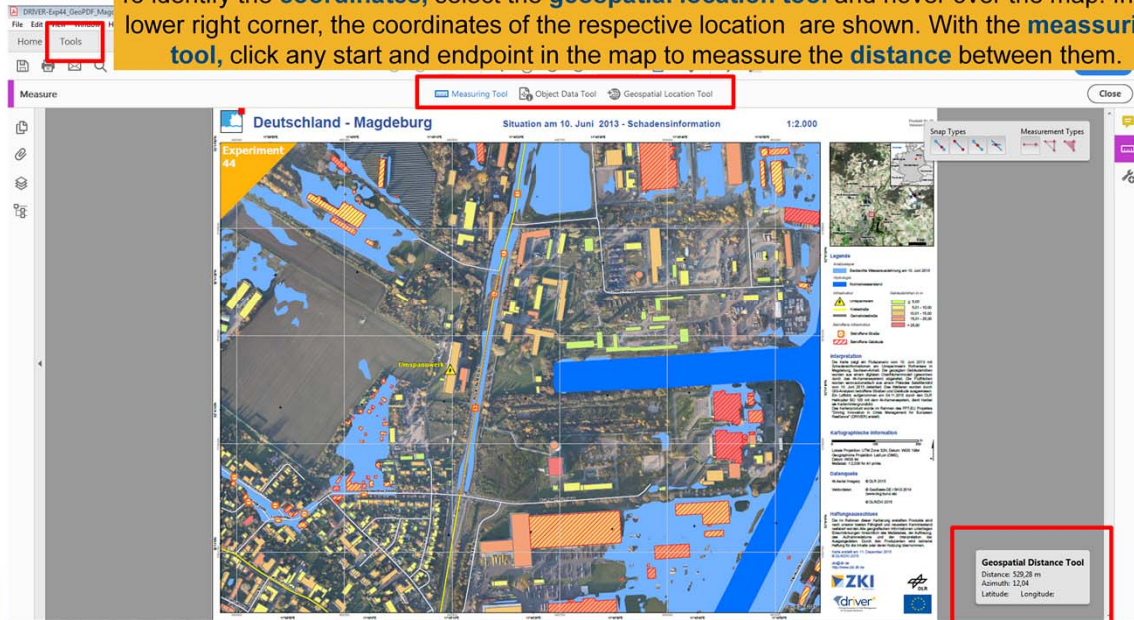
1:2.000

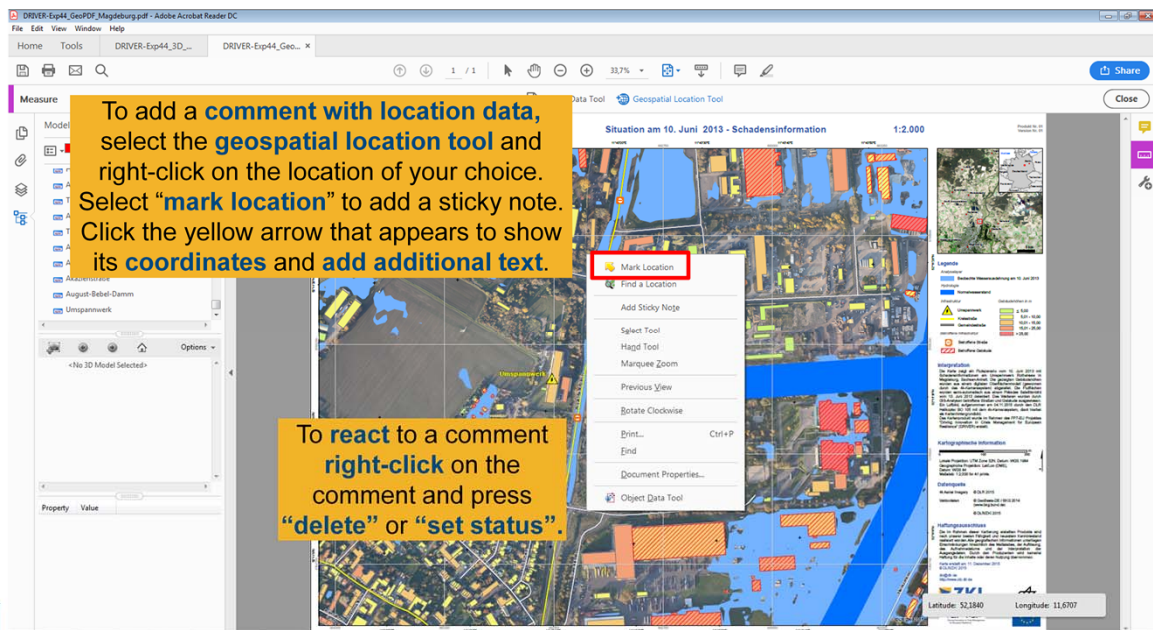
Experiment 44

Individual map layers can be shown or hidden by clicking on the check marks.

The screenshot shows a GIS application window with a map of Magdeburg, Germany. The map displays various layers including buildings, roads, and water bodies. A legend on the right side of the map provides details about the layers and their symbology. The layers panel on the left side of the map shows a list of layers with checkmarks indicating which layers are currently visible. A text box with a yellow background and black text is overlaid on the map, stating: "Individual map layers can be shown or hidden by clicking on the check marks." The text box is positioned over the map area, specifically over the central part of the map. The layers panel on the left has a red box around the checkmarks for the "Gitternetz" layer. The map title is "Deutschland - Magdeburg" and the subtitle is "Situation am 10. Juni 2013 - Schadensinformation". The scale is "1:2.000". The map shows a large blue area representing water, with buildings and roads in various colors. The legend on the right includes a scale bar and a north arrow. The layers panel on the left includes a list of layers with checkmarks. The text box is positioned over the map area, specifically over the central part of the map.

For measuring, go to the **tools** tab → select **measure** → new **toolbar** opens.
To identify the **coordinates**, select the **geospatial location tool** and hover over the map. In the lower right corner, the coordinates of the respective location are shown. With the **measuring tool**, click any start and endpoint in the map to measure the **distance** between them.





To add a **comment with location data**, select the **geospatial location tool** and right-click on the location of your choice. Select **“mark location”** to add a sticky note. Click the yellow arrow that appears to show its **coordinates** and **add additional text**.

To **react to a comment** right-click on the comment and press **“delete”** or **“set status”**.

ZKI HANDS-ON TRAINING

ACCESSING AND WORKING WITH ZKI 3D PDF MAP DOCUMENTS

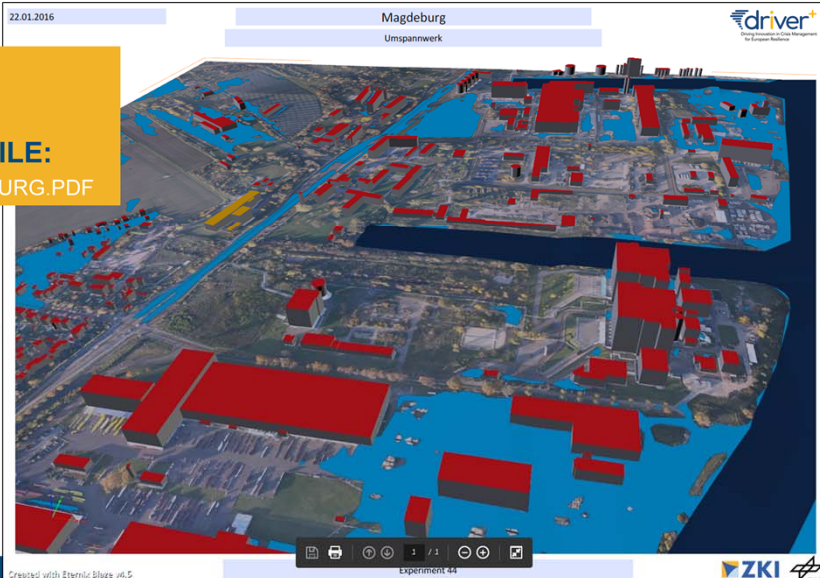
PLEASE USE SHORTLINK

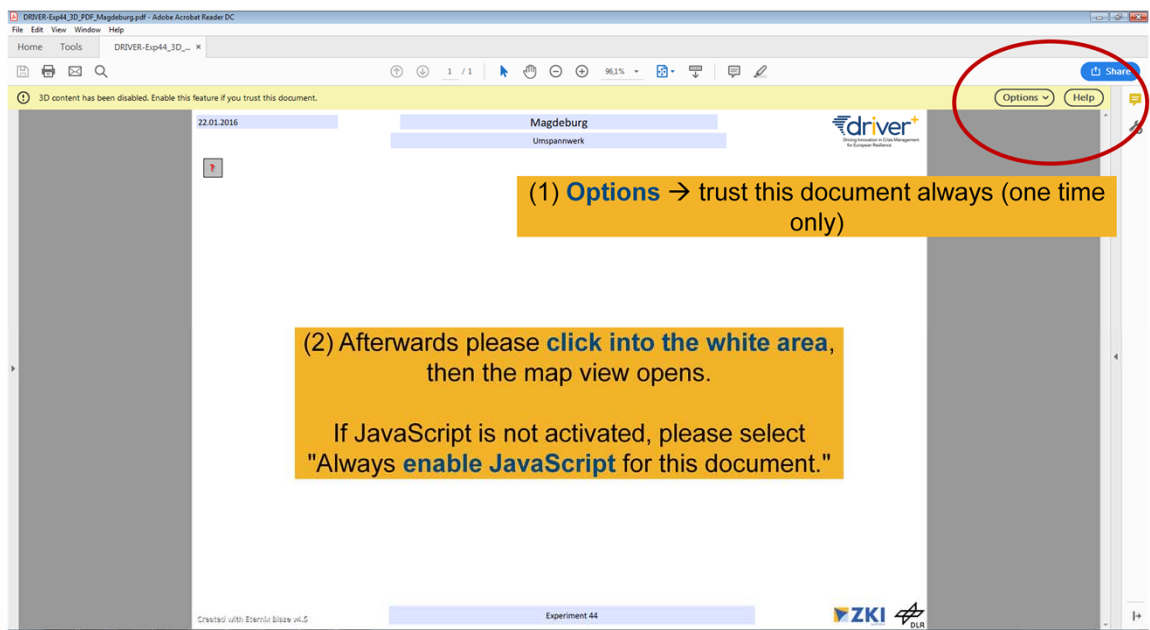
[HTTP://S.DLR.DE/M878](http://s.dlr.de/M878)

DOWNLOAD AND OPEN FILE:

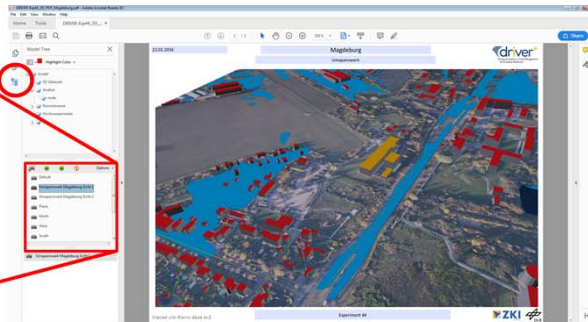
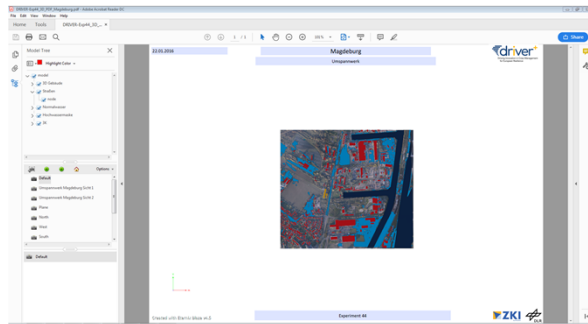
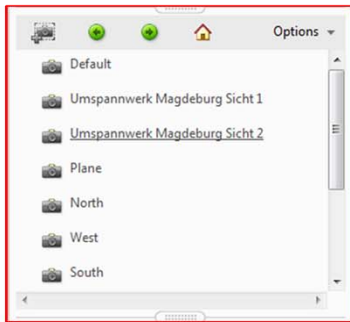
[DRIVER-EXP44_3D_PDF_MAGDEBURG.PDF](#)

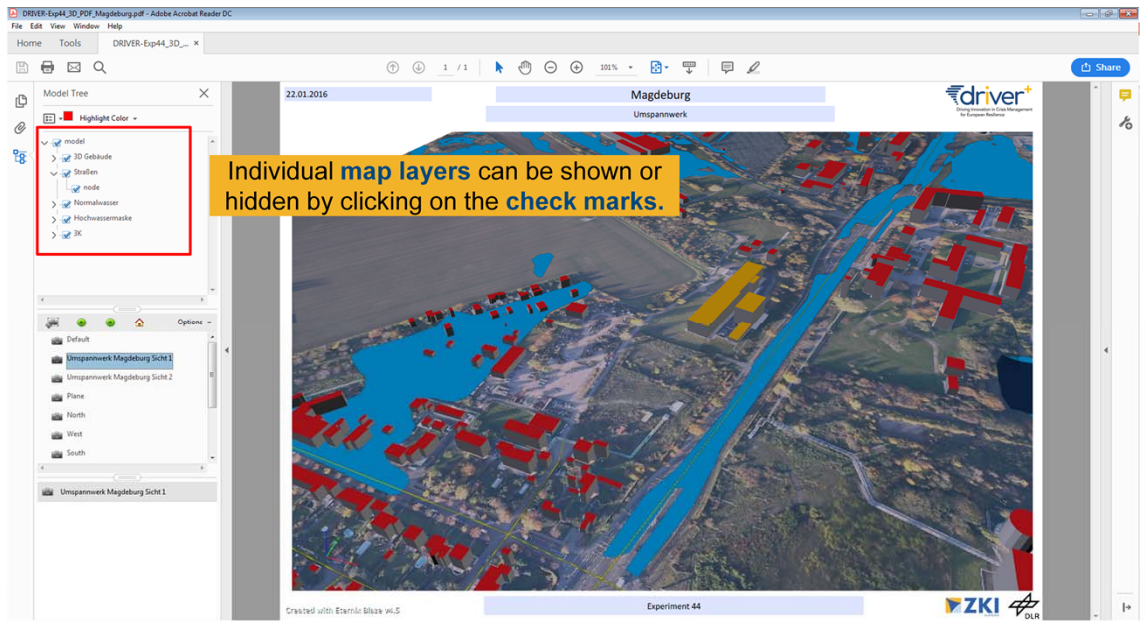
- Open 3D PDF
- Navigate through 3D environment
- Toggle map layers for custom map view
- Make measurements
- Make comments
- Access attribute information





ZOOM: Shift + Mousemovement
or Mousewheel
PAN: STRG + Mousemovement
ROTATE: hold left mouse button
down + move
Quick Views: open model tree +
press default views





22.01.2016

Magdeburg

Umspannwerk

driver+

Share

Model Tree

- 184340
- 184341
- 184342
- 184343
- 184344
- 184345
- 184346
- 184349
- 184411
- 184708

Options

- North
- West
- South
- East
- Ortho
- MeasurementID0
- MeasurementID1

Property	Value
ID	473
Name	13.48
OBJECTID	184708

To access attribute information click on an object of your choice. It will be highlighted in red and the attached values are viewed in the attribute bar.

Created with Enrici Siles v1.5

Experiment 44

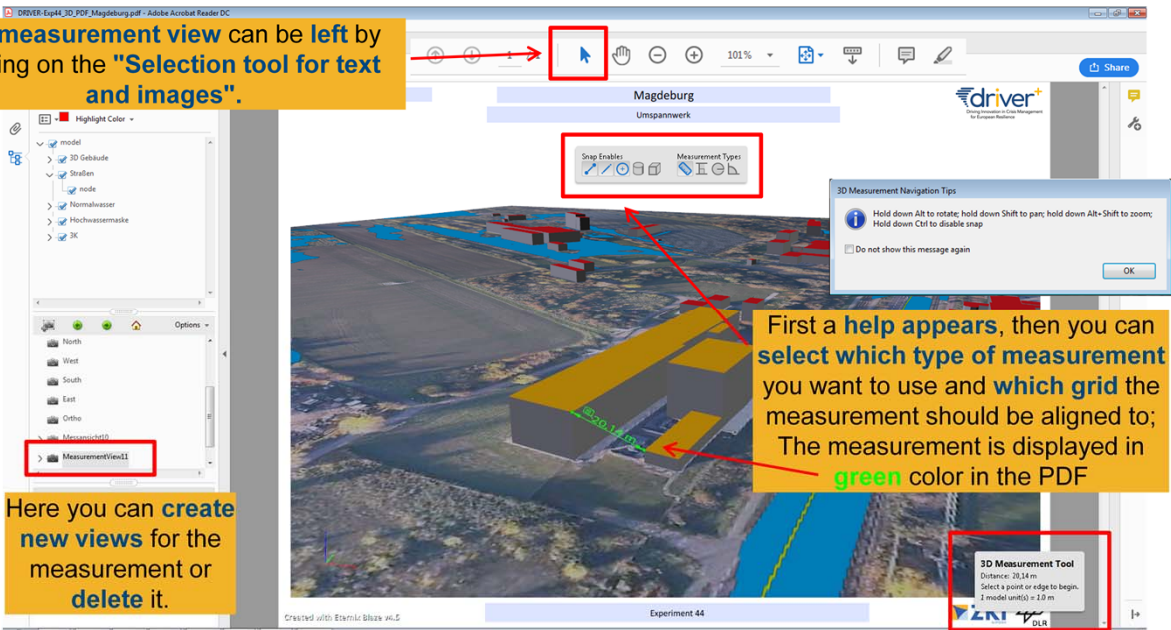
ZKI DLR

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DRIVER+ Project

By right clicking into the 3D surface → tools → 3D measuring tools different heights can be measured

The measurement view can be left by clicking on the "Selection tool for text and images".

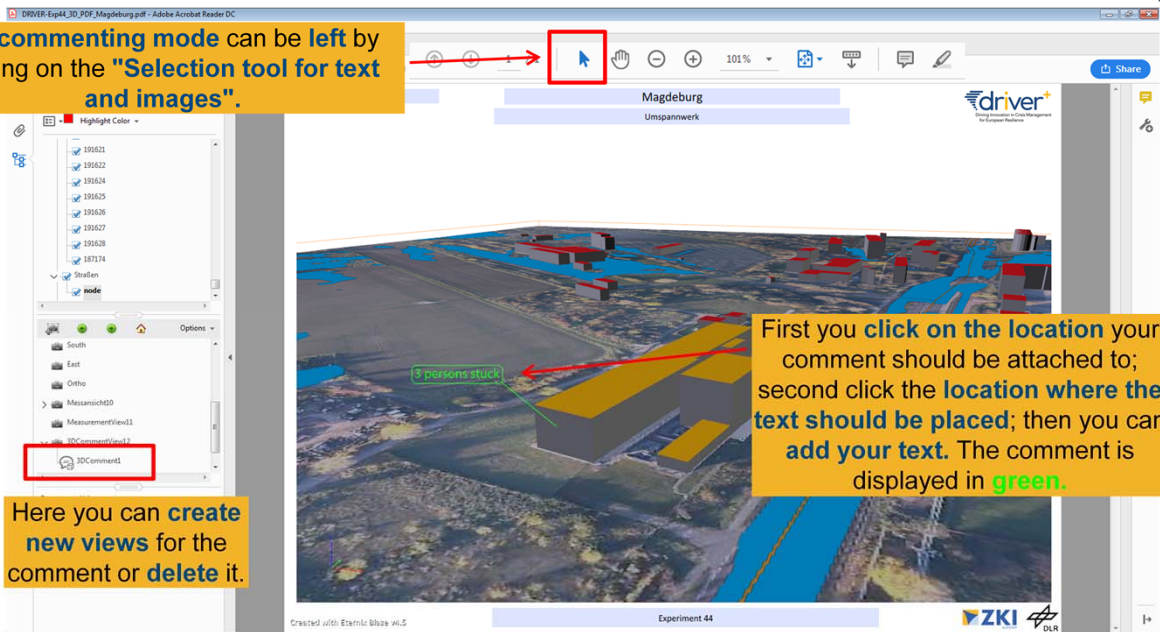


First a help appears, then you can select which type of measurement you want to use and which grid the measurement should be aligned to; The measurement is displayed in green color in the PDF

Here you can create new views for the measurement or delete it.

By **right clicking** into the 3D surface → **tools** → **Add 3D comment** you can add further information.

The **commenting mode** can be left by clicking on the **"Selection tool for text and images"**.



First you **click on the location** your comment should be attached to; second click the **location where the text should be placed**; then you can **add your text**. The comment is displayed in **green**.

Here you can **create new views** for the comment or **delete it**.



zki@dlr.de
www.zki.dlr.de

The letters 'DLR' are displayed in a large, glowing, orange-yellow, 3D-style font. They are positioned in the lower-left quadrant of the image, set against a background of a blurred Earth from space. A thin, glowing orange line runs horizontally across the middle of the image, passing behind the letters.

CONTACT REACH US



@driver_project



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Driver Project



Driver Project

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