

# Landslide-Monitoring

**Patent Filed  
By Hesotech GmbH**



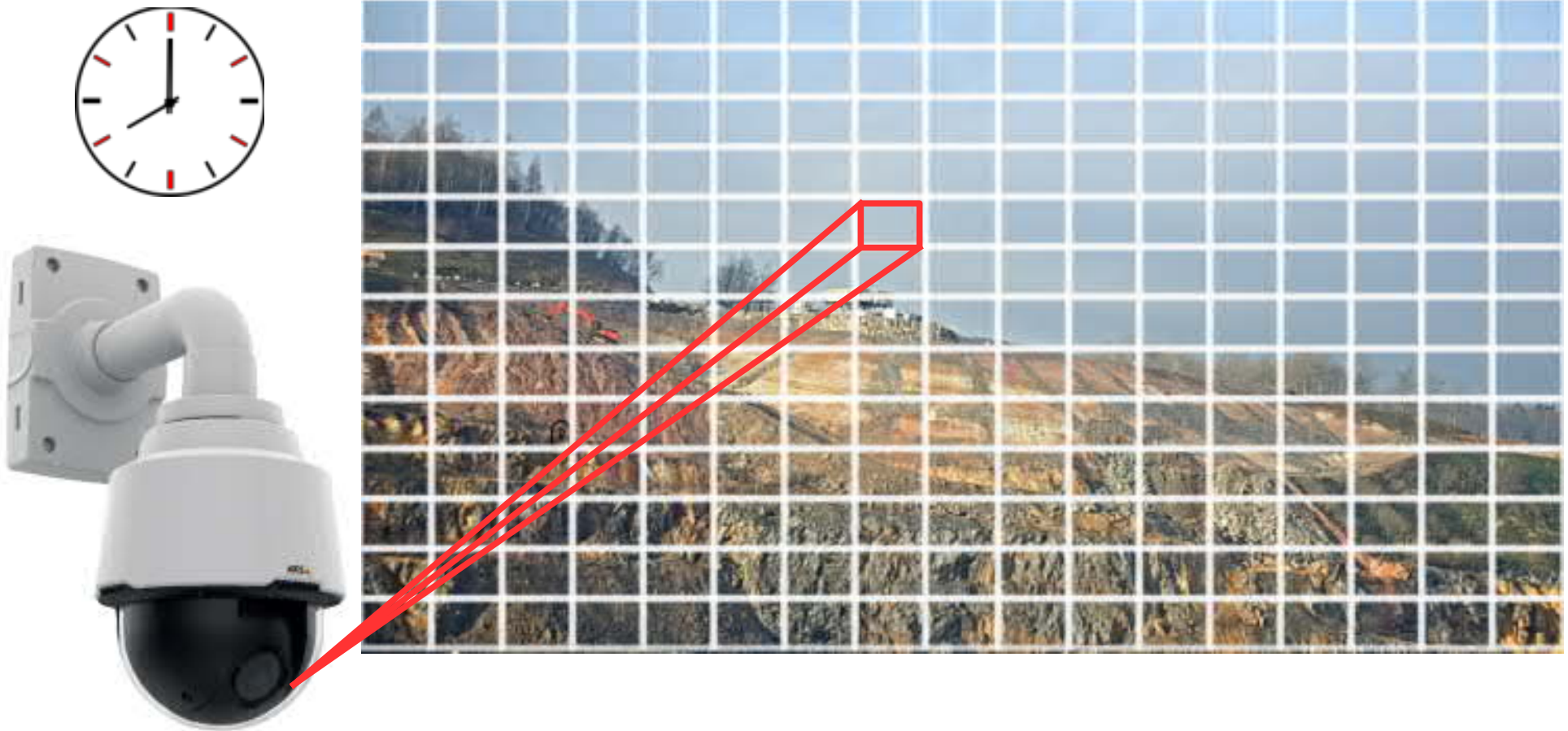
# Landslide in Quarry



13.05.2016

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# Prinzip: Zyklischer Scan von Einzelbilder über Szene



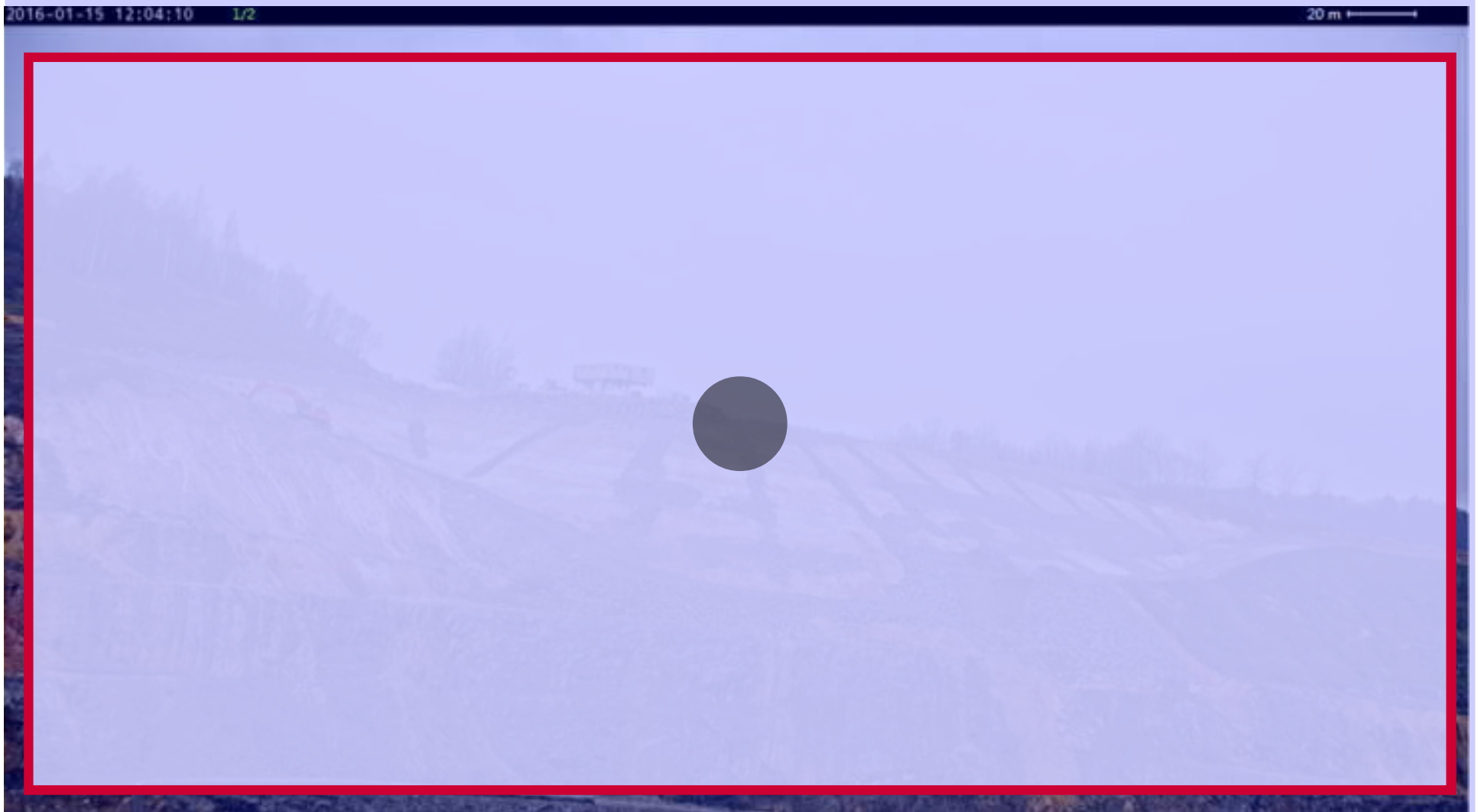


# Total: Region Of Interest



# Layer 1, Zoom 1: (1 row, 1 col)

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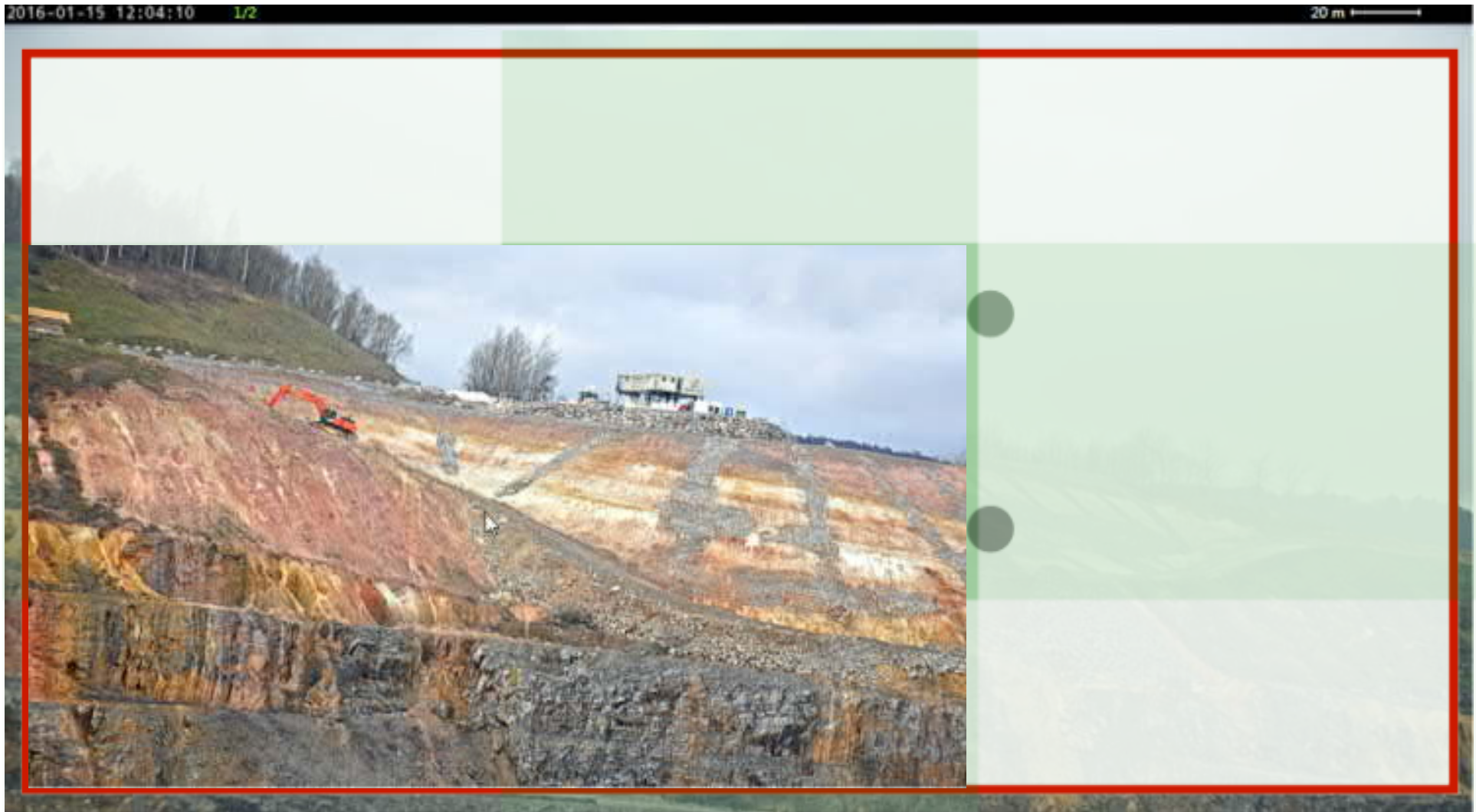


# Layer 2, Zoom 2: (2 row, 2 col)





# Layer 2, Zoom 2 :(2 row, 2 col)



# Layer 3, Zoom 3: (4 row, 4 col)





# Layer 3, Zoom 3



# Layer 4, Zoom 4: (8 row, 8 col)

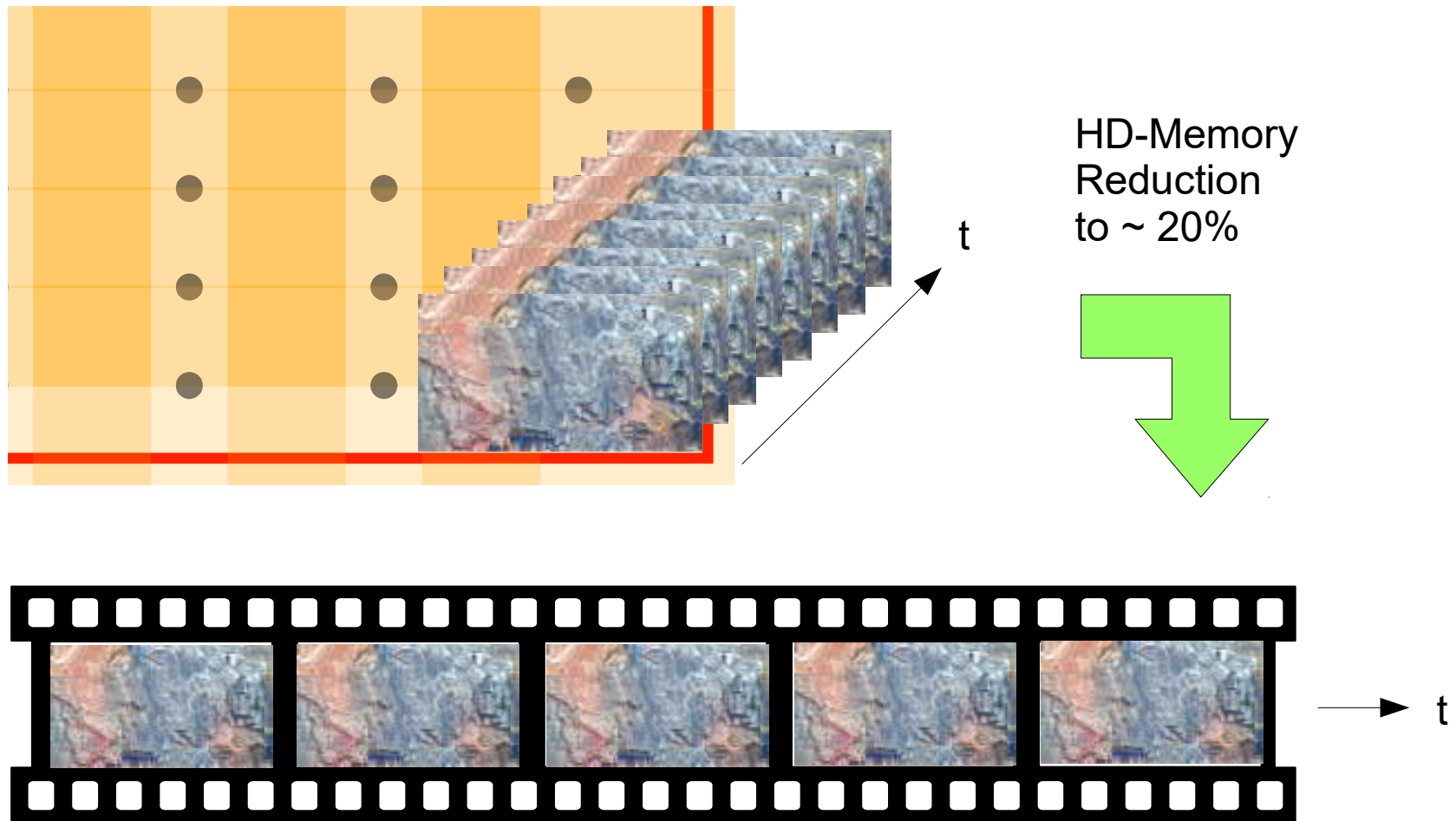


# Layer 4, Zoom 4: (8 row, 8 col)





# Tile-Sequence Images → Video



# Graphical-User-Interface

The screenshot displays the i-master software interface. At the top, there are navigation controls for Layer (n=4), Row (n=12), and Col (n=13). The main window is divided into several sections:

- Top Left:** A small thumbnail image of a landscape.
- Table:** A data table with columns L, R, C, Date, Memo, and ID. The row with L=4, R=10, C=12, Date=2016-02-05 is highlighted in blue.
- Bottom Left:** An SVG logo.
- Main View:** A large satellite-style image of a field with a red pin marker. The image has a timestamp of 2016-02-12 10:05:42 and a scale bar of 2m.
- Bottom Right:** A weather chart showing precipitation (blue bars) and temperature (orange line) over time. The x-axis shows dates from 2016-01-23 to 2016-02-20. The y-axis shows precipitation in mm and temperature in °C.

At the bottom of the window, there is a status bar showing the file path '2016/02/Images/3/8/11/2016-02-12709\_002.jpg' and weather information 'Diet: 7:45->17:38'.



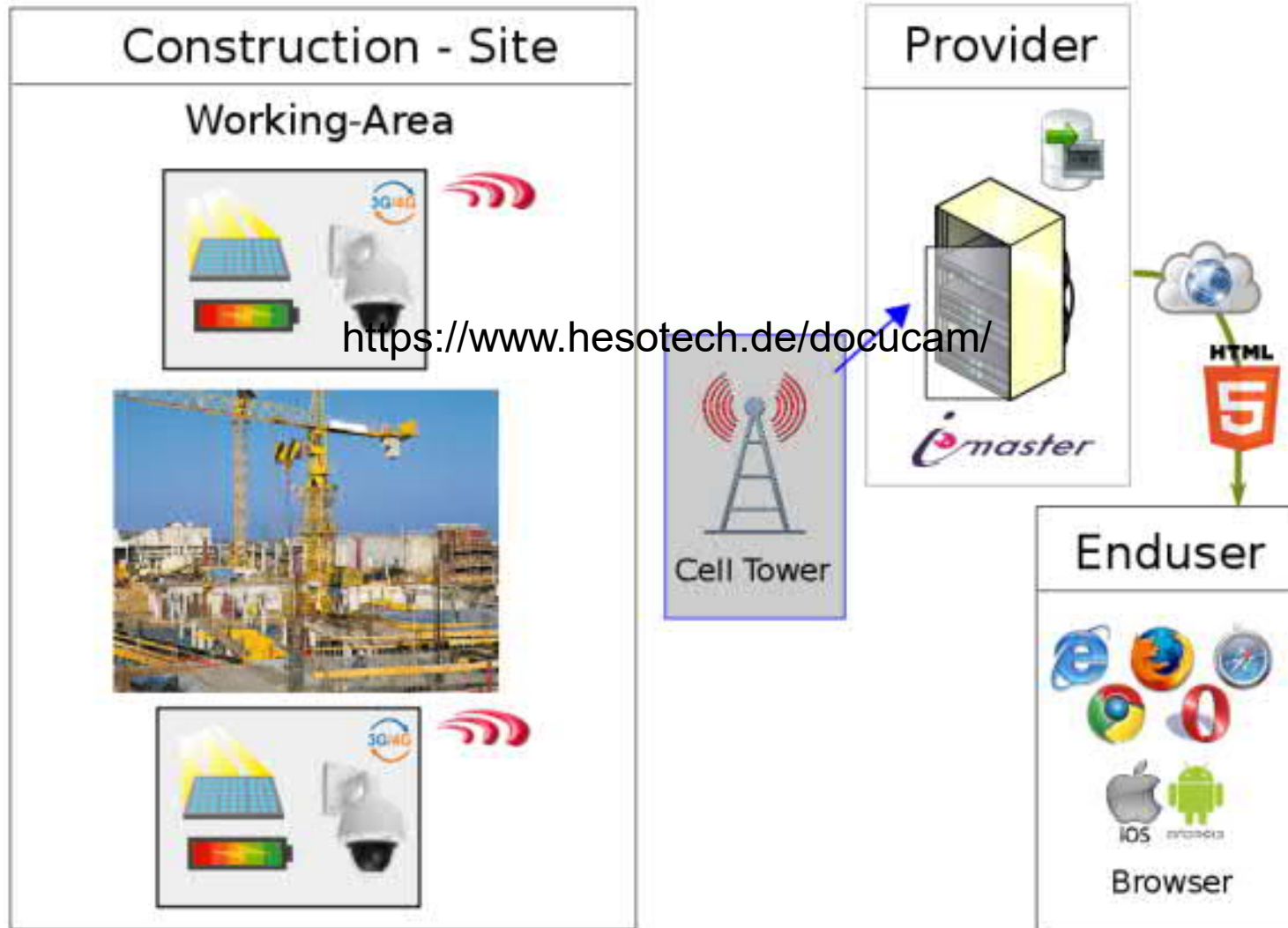
Edit Coordinates      Edit Tile-Sequences      Scroll Tiles      Anchor-Point

Complete Scene  
 Detail Section  
 List of Tile-Sequences  
 Selection of Time Range  
 Weather-Data

L	R	C	Date	Memo	??
0	8	0	2016-01-23		
2	2	0	2016-02-05		
2	2	3	2016-02-12	Memo	
3	7	3	2016-02-07		
3	8	11	2016-02-05		
4	10	12	2016-02-05		
4	11	11	2016-02-07		
4	11	13	2016-02-06		



# DocuCam-Solution Datatransfer t Provider



# DocuCam-Solution Automated Landslide Detection

2016-02-10 16:05:49



2016-02-14 10:06:02



Movements visualized by arrows



# DocuCam-Solution

## Motion Detection Algorithm

Optical Flow:  
Tracing of Characteristic Features  
By Methods of Computer Vision

