



M17176 - First version of depth maps for Poznan 3D/FTV test sequences.

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Poznan sequences

- The depths have been estimated basing on guidelines in N10926
- Poznan_Hall sequence has been split into two sequences Poznan_Hall1 and Poznan_Hall2
- Some of the parameters have been changed



Input and output views for MVD representation (2-view)

Data set	Original Pair OL-OR	Synthesized Pair SL-OR (OL-SR)	Frame Range for EE1
Poznan_Hall1	1-2	1.5-2	0~199 (0~199 from original <i>Poznan_Hall</i>)
Poznan_Hall2	6-7	6.5-7	0~199 (350~549 from original <i>Poznan_Hall</i>)
Poznan_Street	3-4	3.5-4	150 ~349
Poznan_Carpark	3-4	3.5-4	200~399



Input and output views for MVD representation format (3-view)

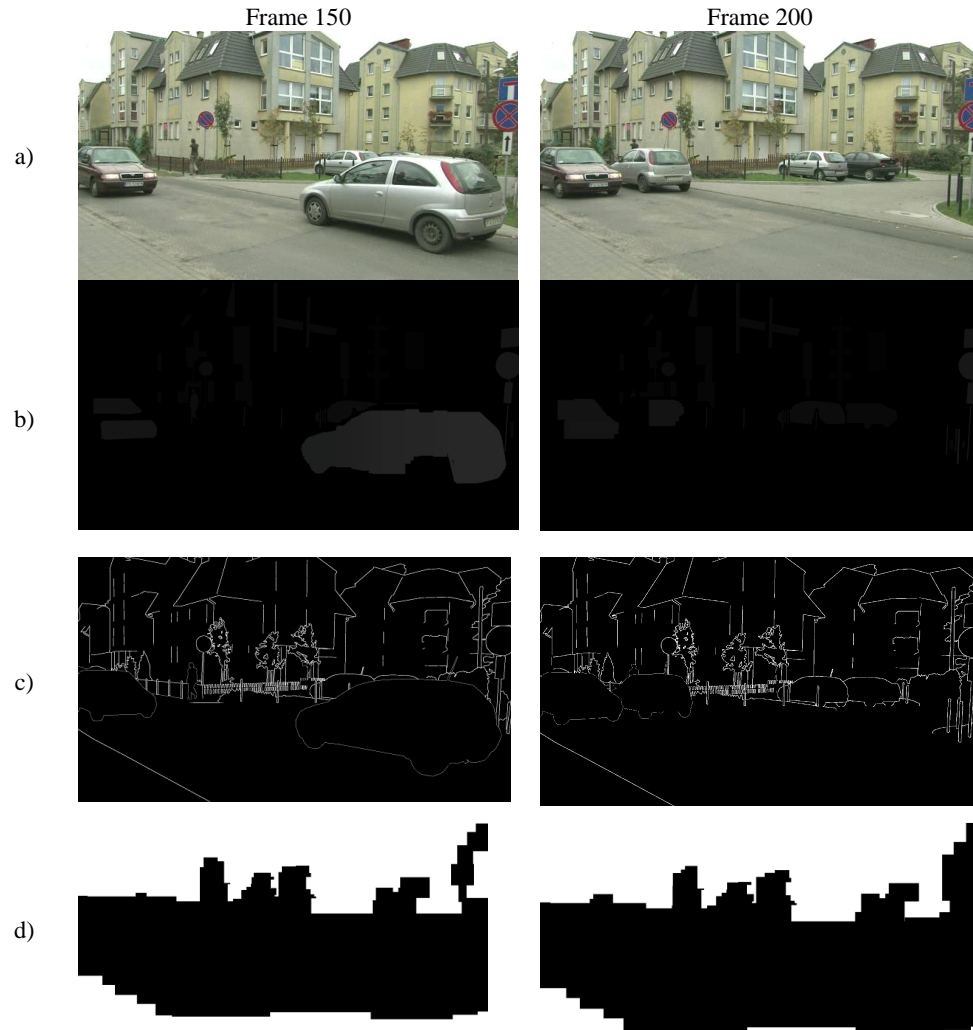
Data set	Original Views OL-OC-OR	Views to Synthesize for stereo viewing ¹	Views to Synthesize for 9-view display ²
Poznan_Hall1	1-2-3	1.875, 2.125	1.5, 1.625, 1.75, 1.875, 2.125, 2.25, 2.375, 2.5
Poznan_Hall2	5-6-7	5.875, 6.125	5.5, 5.625, 5.75, 5.875, 6.125, 6.25, 6.375, 6.5
Poznan_Street	3-4-5	3.875, 4.125	3.5, 3.625, 3.75, 3.875, 4.125, 4.25, 4.375, 4.5
Poznan_Carpark	3-4-5	3.875, 4.125	3.5, 3.625, 3.75, 3.875, 4.125, 4.25, 4.375, 4.5



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- Estimation with DERS 5.0
 - Semi-automatic mode
 - edge maps (MEM)
 - disparity constraints maps (MDM)
 - static maps (MSM)
 - Temporal Enhancement



Poznan_Street - manual





Poznan_Street view 3



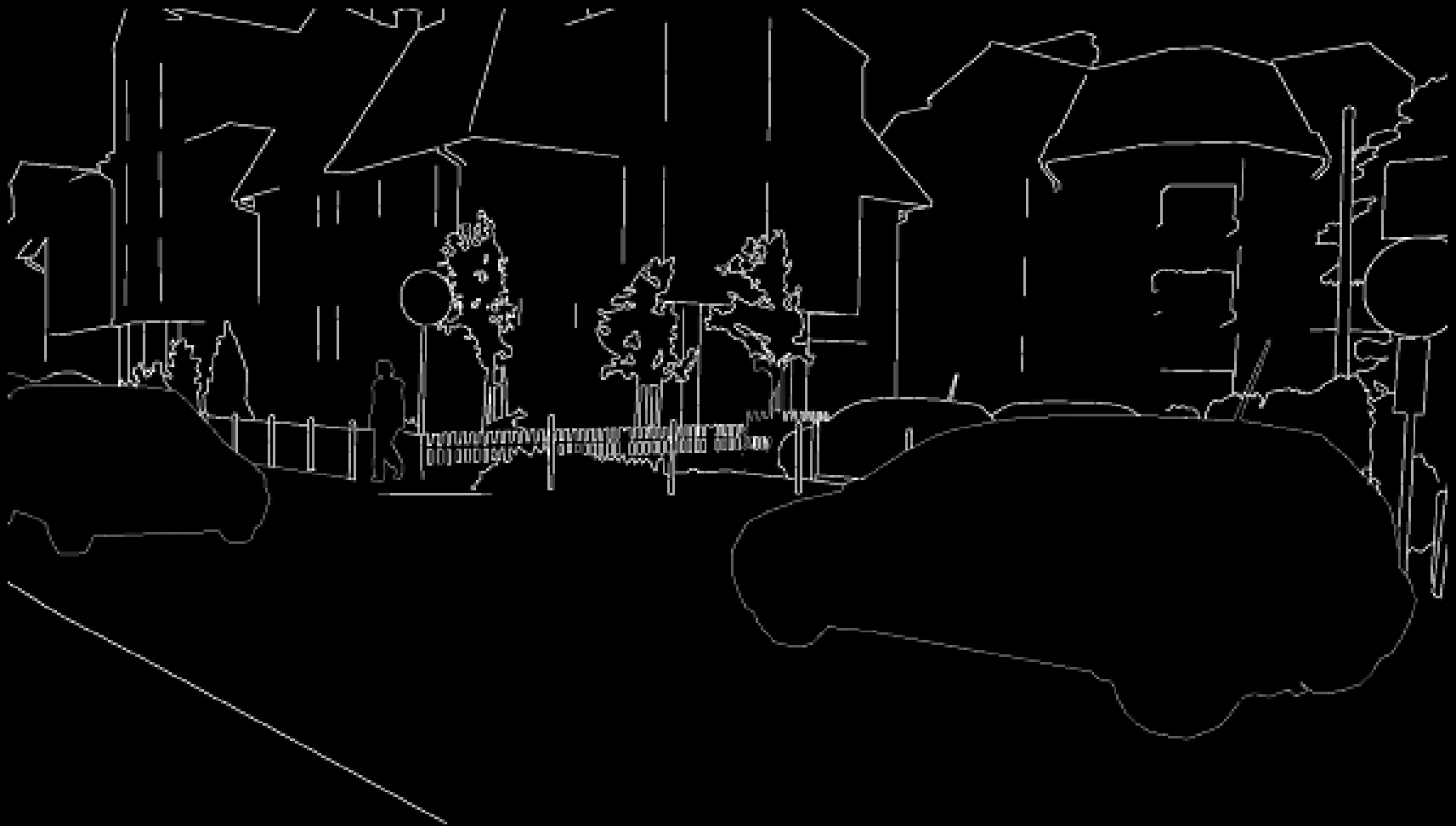


Poznan_Street manual data





Poznan_Street manual data





Poznan_Street manual data





Poznan_Street - depth



m17176



Poznan_Street - depths



a) Frame 150



b) Frame 151



c) Frame 200



d) Frame 201



Poznan_Carpark - manual

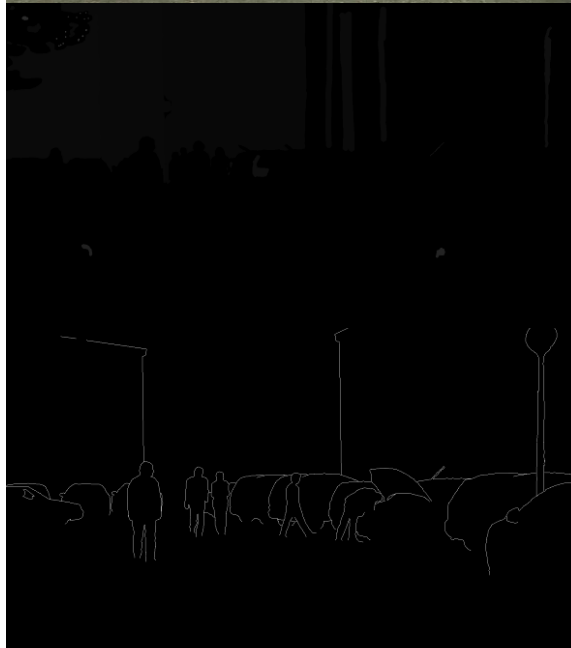
View 3

View 5

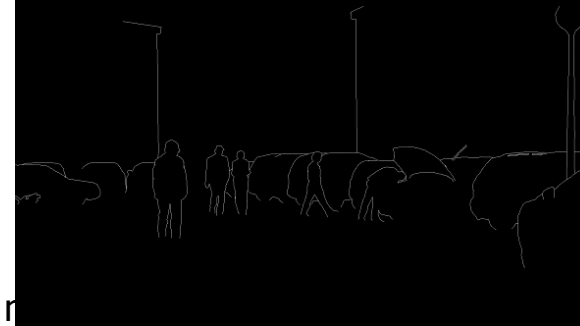
a)



b)



c)



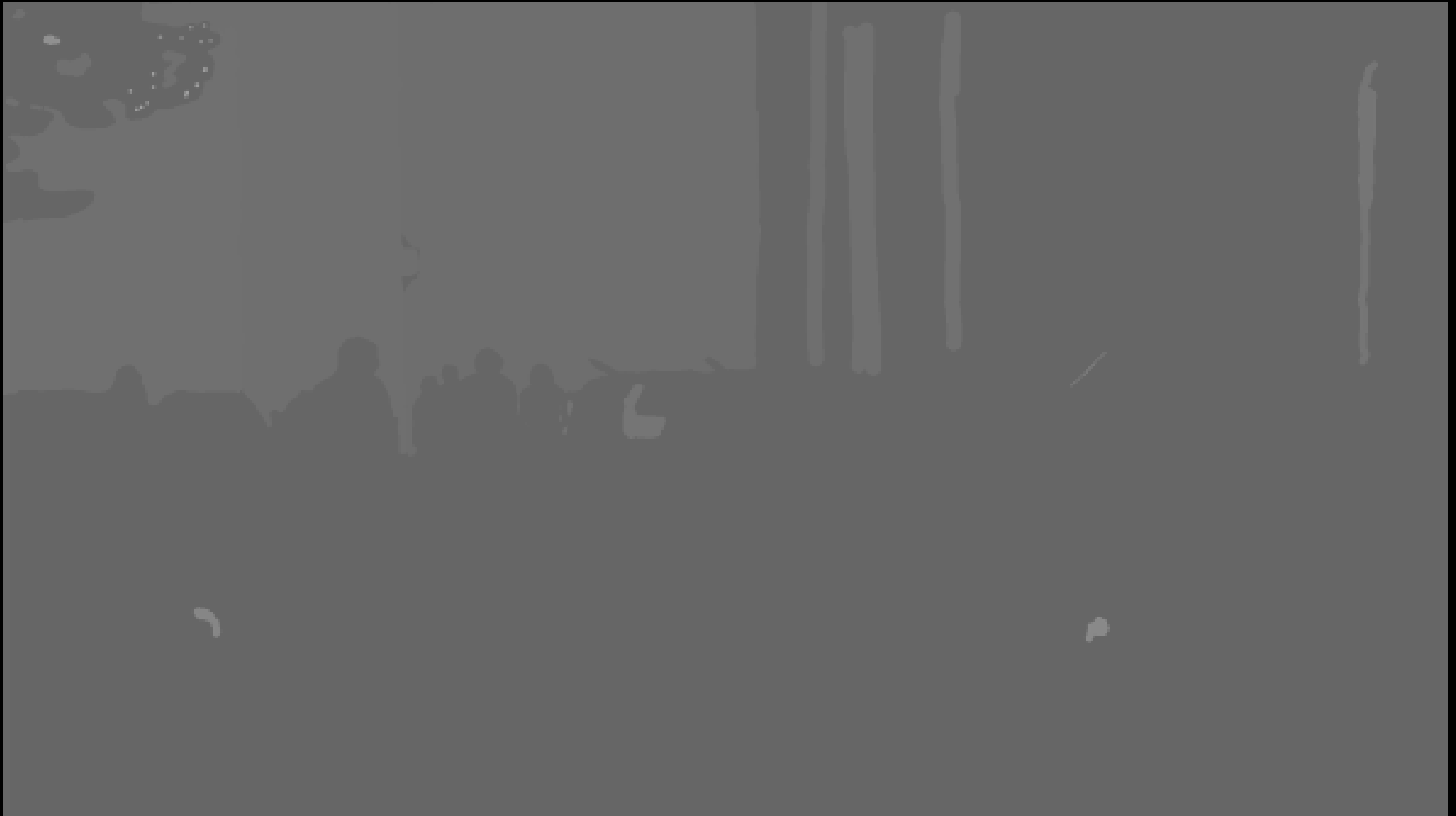


Poznan_Carpark – view 3



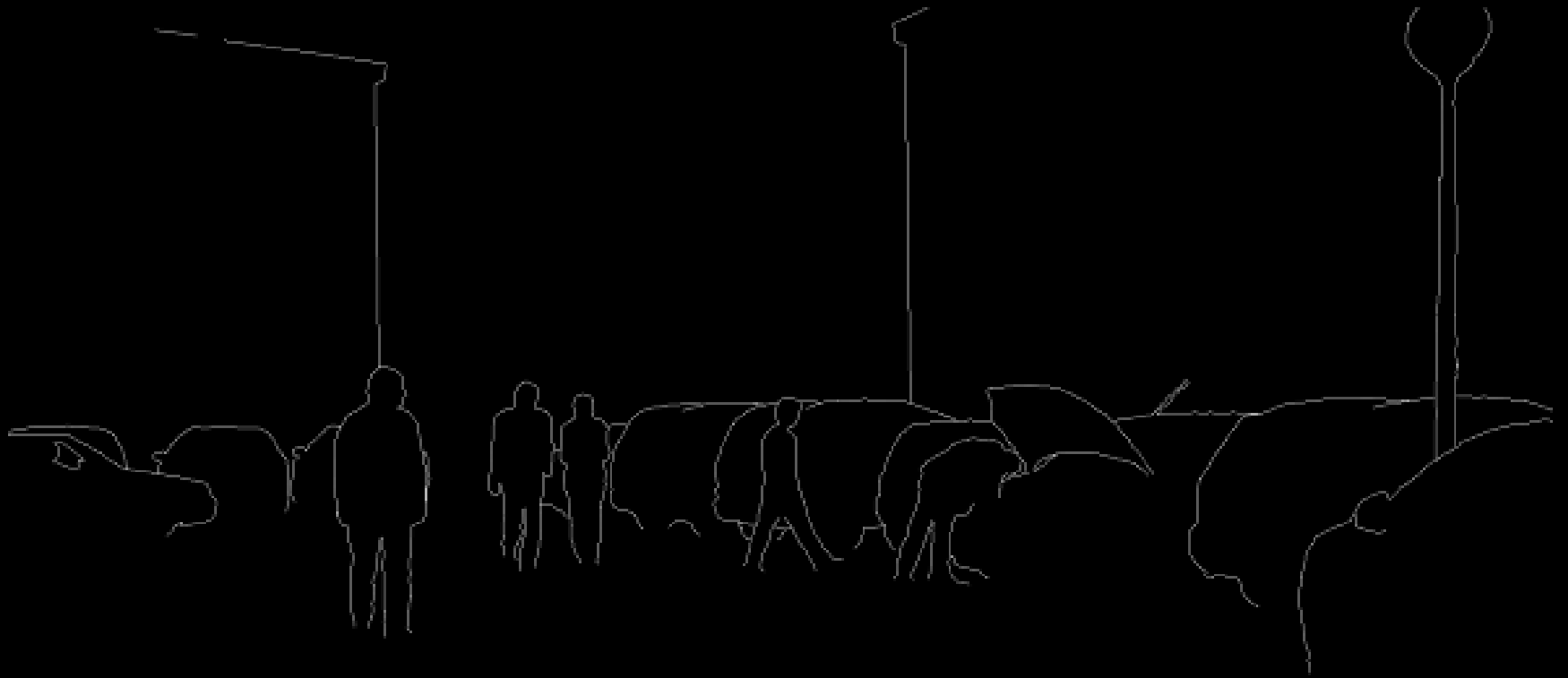


Poznan_Carpark - manual





Poznan_Carpark - manual



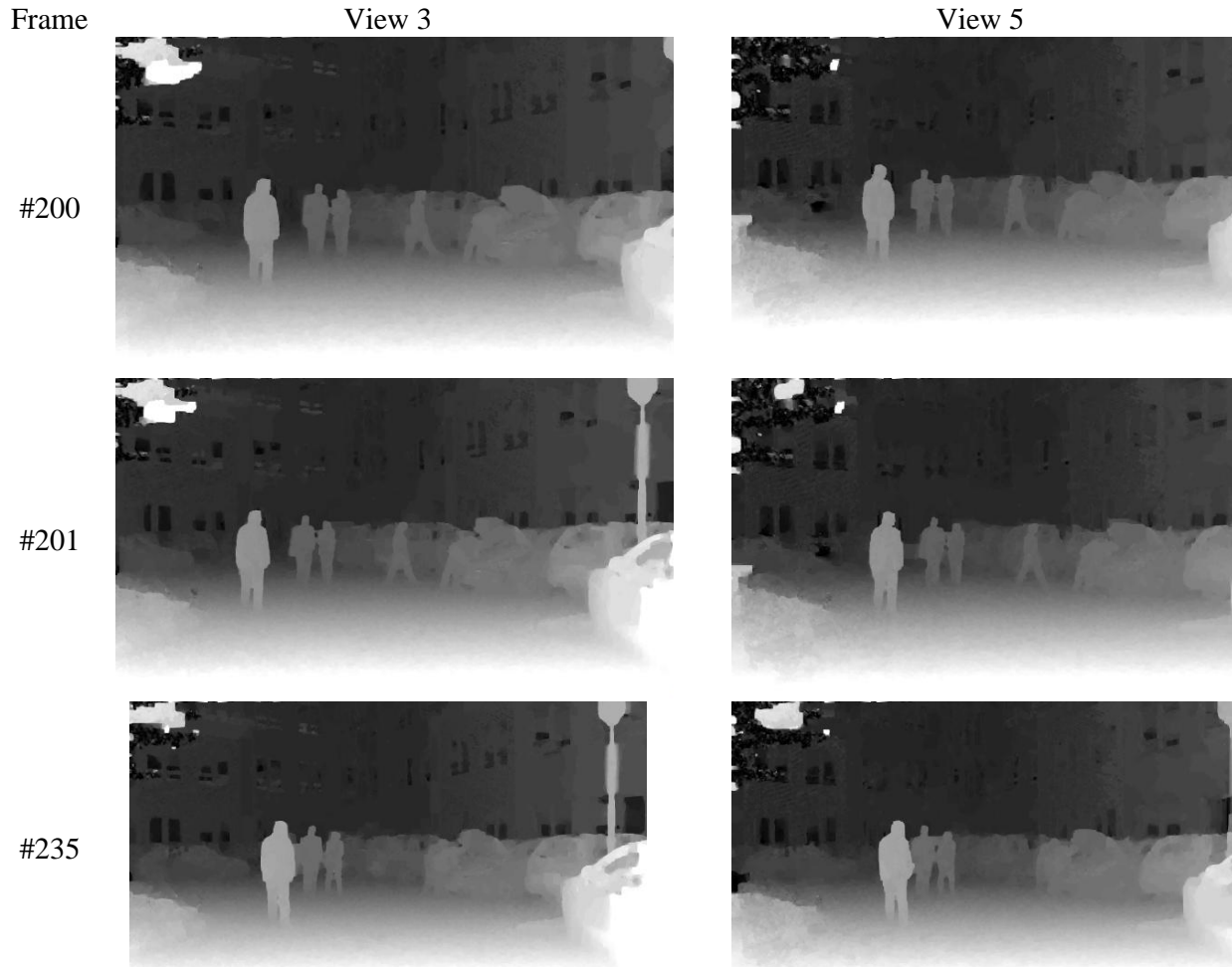


Poznan_Carpark - depth





Poznan_Carpark - depths





Poznan_Hall 1 and 2

- Estimation with DERS 5.0
- Automatic mode only
- Temporal Enhancement



Poznan_Hall1 depth for view 1



Poznan_Hall1 - depths



a) Frame 0



b) Frame 25



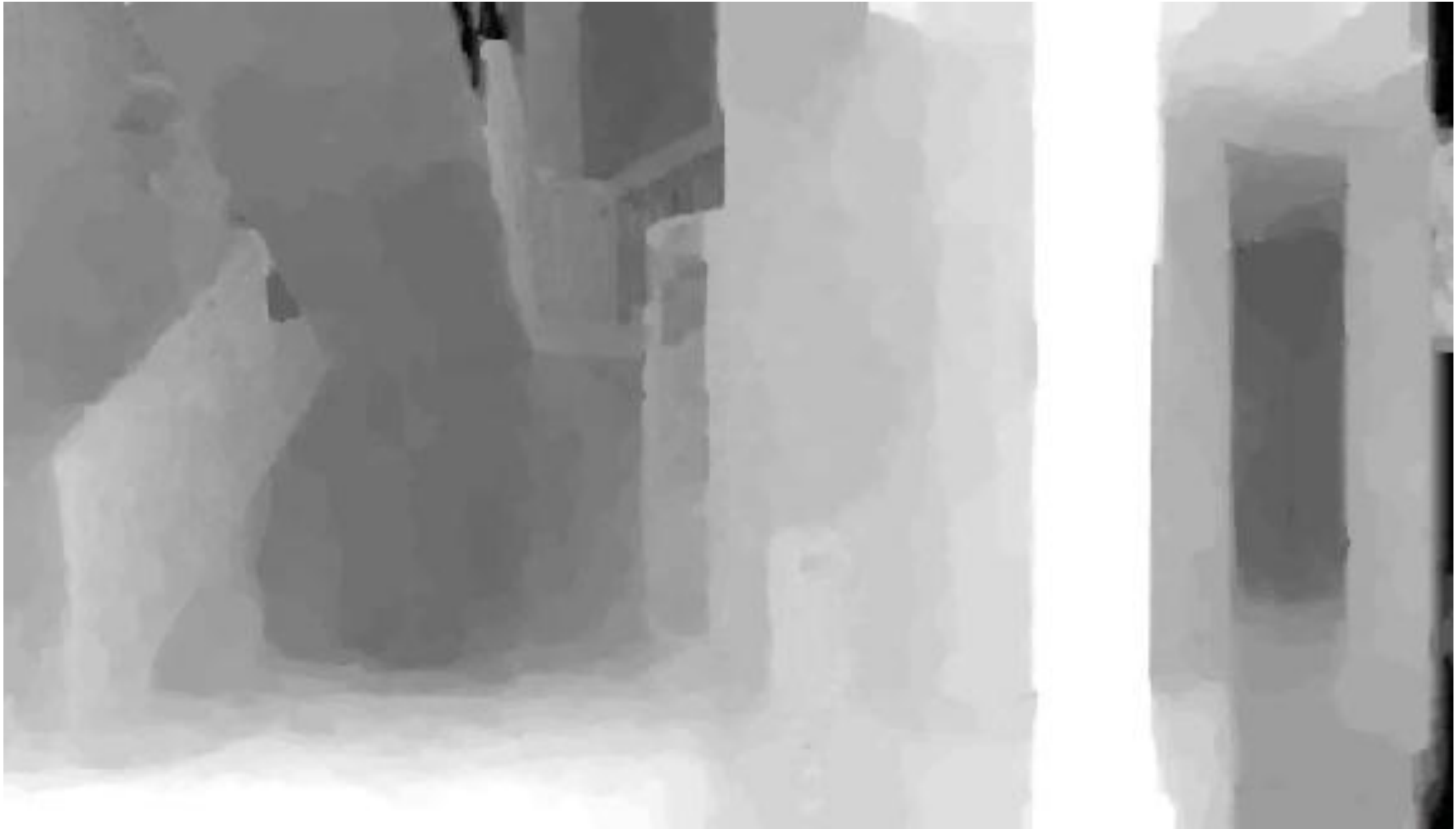
c) Frame 50



d) Frame 75



Poznan_Hall2 depth for view 6





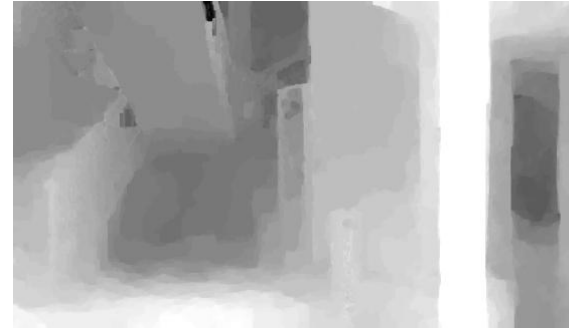
Poznan_Hall2 - depths

Frame

View 6

View 7

#0



#100



#150





Poznan_Carpark synthesized view 3.5





Poznan_Street synthesized view 3.5





Poznan_Hall1 synthesized view 1.5





Poznan_Hall2

synthesized view 5.5





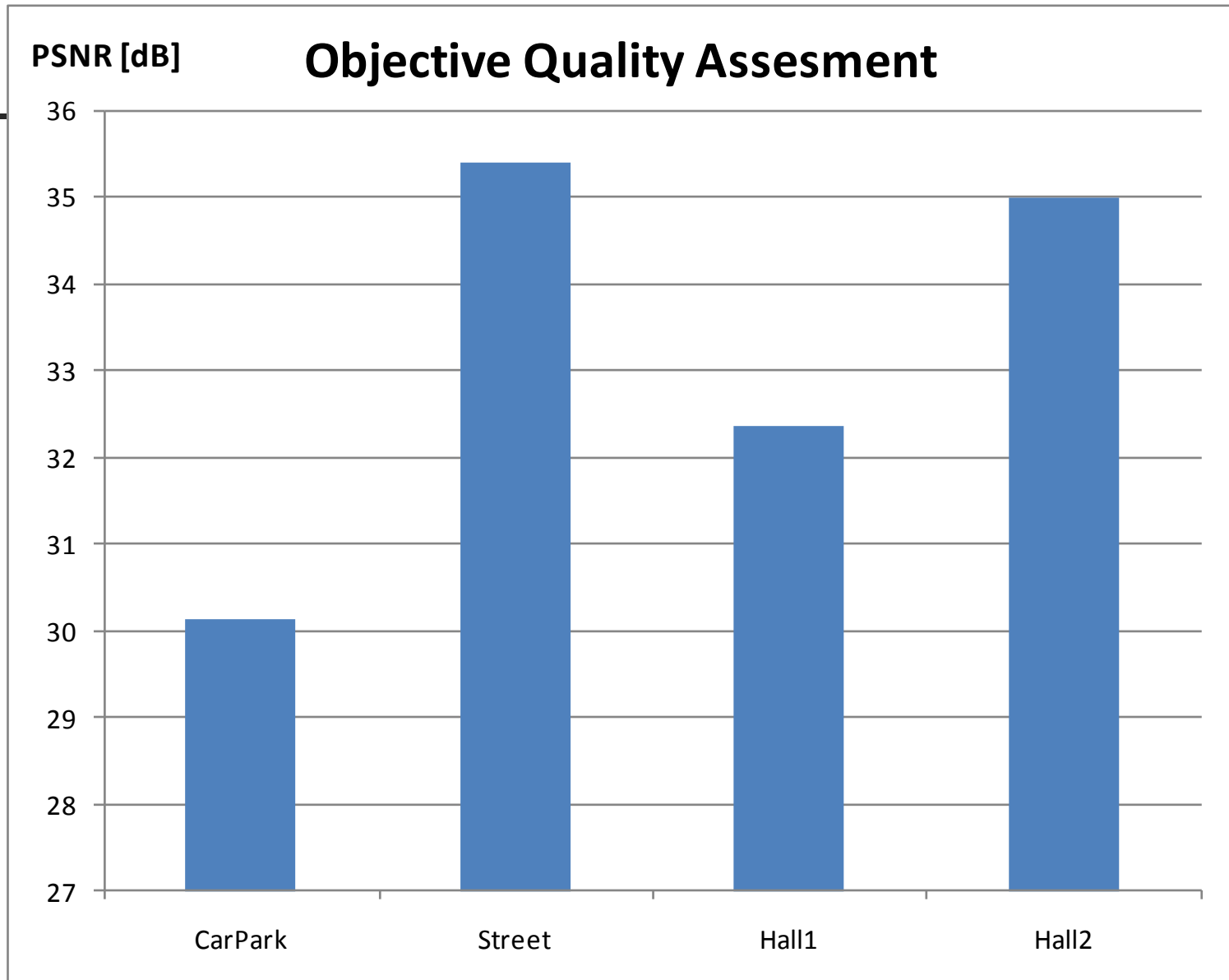
Objective evaluation

- View configuration for synthesis-based objective quality assessment.

Data set	Original Pair	Synthesized View
Poznan_Hall1	1-3	2
Poznan_Hall2	5-7	6
Poznan_Street	3-5	4
Poznan_Carpark	3-5	4



Synthesis quality





Conclusions 1/2

- DERS should be improved to allow better usage of key-frames in sequence time-line, because currently key-frame influence only single frame and it is awkward to produce key-frames for each frame of sequences



Conclusions 2/2

- Quality of the depth maps is good, but there is still some work to be done.
- Sequences and depth maps are available on FTP site:
 - <ftp://multimedia.edu.pl/3DV/>