

Interactive comment on “A fast TDR-inversion technique for the reconstruction of spatial soil moisture content” by S. Schlaeger

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In order to find out something about the accuracy (regarding to spatial resolution, spatial accuracy and electrical accuracy) these fairly “academic” examples were chosen. The existence of discontinuous transitions may sometimes cause limitations to spatial reconstruction algorithms, especially when the chosen discretization of the algorithm does not fit with the changes in the material. If the shape of the dielectrical profile has smooth transitions (i.e. caused by the transition from the saturated to the Vadose zone) the profiles can be reconstructed more precisely. A second reason for choosing analytical examples is that the results of the inverse problem can be compared to the exact parameters of the forward problem.

But it is also interesting how the algorithm works on real problems. As anonymous referee #2 points out, many references of our method were presented on conferences. I talked to my colleagues of the Soil Moisture Group (SMG) and we will publish a survey of different applications of our method to show the assets and drawbacks of this

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Spatial-TDR-technique.

Finally I have to say that the algorithm was developed during my studies at the university. It has been developed and redeveloped for many applications of the SMG. In 2005 I have founded my own engineering company and the algorithm will be redesigned for common use. A short notice on these developments will be made my article.

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