On 22 and 23 June 2016, TNO successfully conducted its early trials for the SWARMs project in the Haringvliet estuary in The Netherlands. High-quality channel soundings were performed in the new ultrawide frequency band of the extended TNO softmodem, for intra-node distances up to several kilometers, and for relative speeds up to several knots. These channel sounding measurements will now be used for high-speed modulation development. Preliminary higher-order constellation signals were already transmitted during the Haringvliet trial, and could be successfully demodulated at all considered distances.