

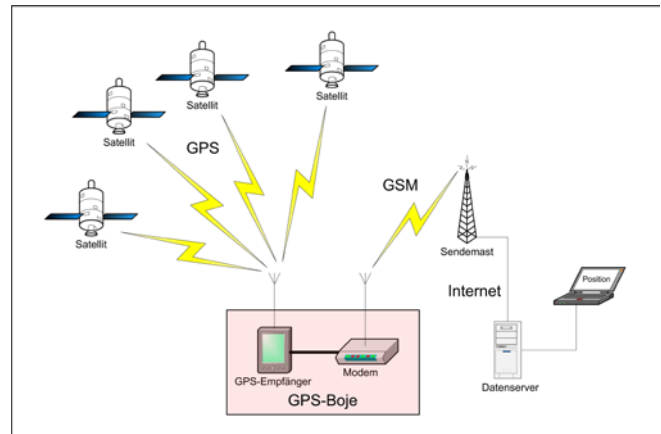
# High-Precision Measurement of Water Movements

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Differential GPS with additional carrier phase tracking and ambiguity resolution allows a user to navigate on cm-level accuracy. In this project a buoy was built that transmits GPS positions and satellite carrier phases several times per second by means of GPRS (GSM packet data mode). This facilitates the measurement of movements of rivers and lakes in real time to an accuracy of a few centimeters.



To accomplish this, hard- and software had to be developed that merge GPS receiver technology with an efficient GSM modem. The hardware is kept generic and can be used in other applications, where fast remote transmission of positions is needed, e.g., fleet management and goods tracking.

