



photos: Consist

## VERS and Google Earth provide information about the Kiel Canal

# Everything in View Down to the Last Detail

By Bodo Krause-Traudes

*The Kiel Canal is the most-traveled artificial shipping lane in the world. Even without considering sports boats and other small vehicles, in 2007 an average of 118 ships per day traversed the canal. Shipping companies, canal pilots, shipping agents, and public administration offices measure and control the traffic, ensuring among other things the safety of shipping traffic for the 99 km between the North Sea and the Baltic. The Vessel Event & Reporting System VERS developed by Consist has provided information since 2006 for the control of processes in the Kiel Canal, and now in connection with Google Earth additional added value is available for individual control by canal pilots and shipping companies.*

### VERS in the Kiel Canal

Seagoing vessels of over 300 GT (gross tonnage) are equipped with AIS units since 2005, which continually transmit identification and navigation data via VHF radio.

### Detailed display possible [down to individual lock chambers](#)

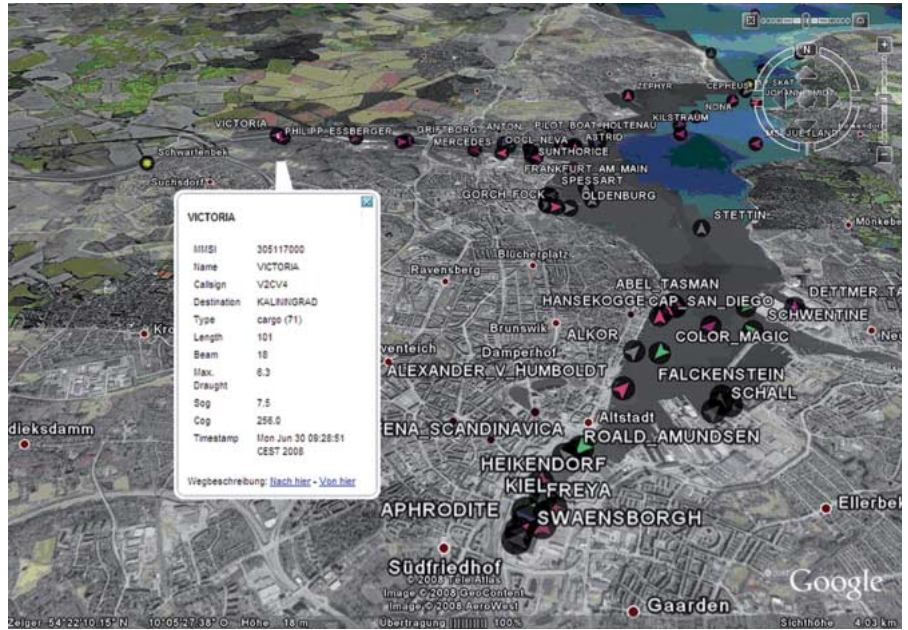
These AIS signals enables the traffic control to detect the positions of ships precisely and to the minute,

in order to ensure and continually improve the safety and smoothness of shipping traffic.

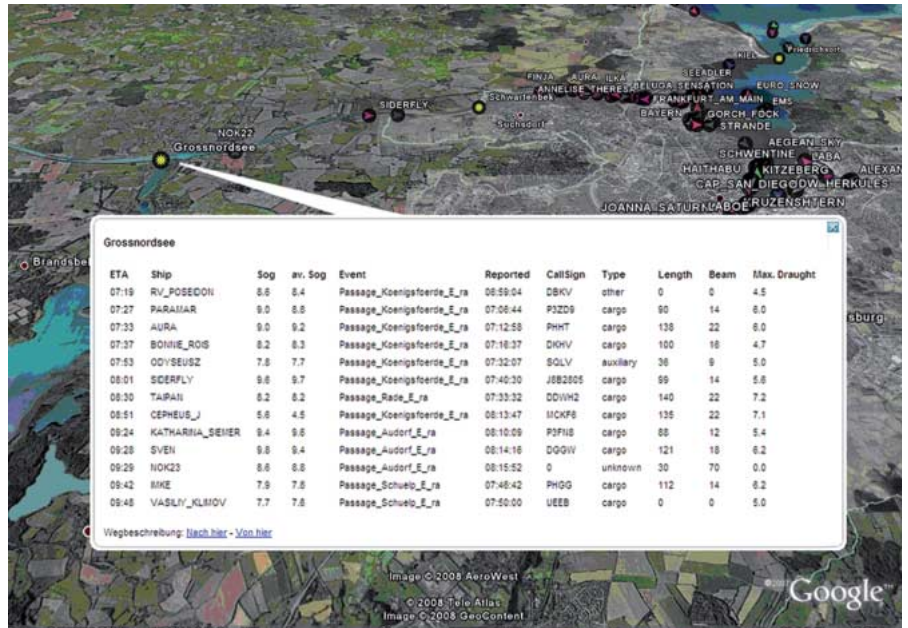
# CONNECT SOLUTIONS

VERS uses the AIS data to display and process shipping data and movements. Ships are already registered by event lines in VERS in the western Baltic Sea, long before they reach the canal. The lines are laid out in such a way that the main shipping lanes in the western Baltic are taken into consideration with cascading multiple event lines permitting the reliable calculation of ETAs (estimated times of arrival) at the Kiel locks and other destinations in the Kiel Canal. The process permits shipping companies and canal pilots both forward-looking planning and also retrospective reporting on historical data for official reports.

The maintenance and administration of lines, events, and destinations is carried out using a VERS role concept and a web-capable VERS GUI. The role concept also provides for pure read-only access to make information about events and ETAs available to a broader user base, such as all the 160 helmsmen currently active.



The way of the Victoria in Kiel Canal towards Kiel



ETA list for a passing point in Kiel Canal

## VERS in Brief

Consist's Vessel Event & Reporting System – VERS – uses AIS data to integrate all process-relevant information such as exact ship positions, port arrival times, logistics necessary for loading and unloading in port, and service providers and transport logistics ashore.

VERS offers customized event management based on process-relevant information. Processes are started “just in time“, required information provided, and thus the maritime transport and value creation chains are optimally integrated.

## Google Earth

Google Earth is familiar to a very wide range of users. Sophisticated Google Earth users know that there is a wide variety of application options and that the basis for reuse – as Google itself desires – is technically very well-supported. This is an ideal prerequisite for the integration of VERS data into the Google Earth user interface.



Since geographical information can be displayed at any scale, the user can zoom into any level, from an overview of current ship positions in the western Baltic down to individual lock chambers and passing areas of the Kiel Canal. Google Earth also integrates detailed information about the ships themselves and the ETAs calculated by VERS, which are displayed at the various destinations.

Besides the pure display form, the solution's ETA lists provide every user with a customized, event-driven time control facility, and thus the option of gaining additional personal free time, essentially given the limited staffing increases and continually growing tonnages in the Kiel Canal.

## Outlook

In connection with Google Earth, the display of many other features, such as event lines, destination areas, etc. is possible. Antennas play a central role in the information platform as the basis of data provision. Information such as locations, conditions and range of antennas can be integrated into Google Earth. With such dynamic information, partially dependent on the weather and radio conditions, Google Earth can provide a fast global overview and monitoring which comprehensively supports system operation.

## 100 Years of Verein der Kanalsteurer

On June 22, 1895, Kaiser Wilhelm II. celebrated the opening in Holtenau of the canal named after him. In its first year of operation, nearly one in every 20 ships suffered accidents. The solution to the problem, according to the president of the canal bureau, Carl Loewe, was to set up helmsmen on the Kaiser Wilhelm Canal based on the model of the Dutch on the Amsterdam North Sea Canal and the Belgians on the Gent Canal.

The canal administration wrote to 37 shipping companies on February 7, 1900, with the request to allow for the training of future canal helmsmen on their ships during canal passage. By April 4, 1900, the first eight trained canal helmsmen were already ready for service.

On September 24, 1908, twenty canal helmsmen founded the "Verein der Kanalsteurer e.V.". The members of the Verein der Kanalsteurer e.V. have the responsibility to man ships subject to canal helmsmen requirements, or ships requesting canal helmsmen, during canal passage in order to ensure their safety.

The Verein der Kanalsteurer e.V. is a union made of up workers employed as canal helmsmen in the interest of shipping on the Kiel Canal. It protects the professional interests of canal helmsmen and ensures the fulfillment of social interests, while excluding any political or religious tendencies. In this context, it performs some functions of an employer in place of the ship owners employing and paying its members in their entirety, insofar as the employment and payment obligations of the ship owners to the canal helmsmen must be regulated and carried out.

To ensure the professional interests and social requirements of the canal helmsmen, the union also handles the distribution of canal pilot administration fees received from the Wasser- und Schifffahrtsdirektion Nord (Water and Shipping Administration, Northern Region). The union is obliged to maintain appropriate authorization prerequisites for its members in close cooperation with the authorities.

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