DESCRIPTION

Real-Time Bridge Monitoring allows to verify in real-time (with a delay of 1 hour due to local server delay) the status of a number of piers of a bridge (in this case the Borgoforte bridge on Po river in Italy) based on some physical parameters, including:

- wind speed [m/s]
- wind direction [°]
- water level [m asl]
- water rate [m3/s]
- river bed level [m asl]
- presence of debris
- presence and type of traffic
- material of the bridge
- structural parameters

This product complies with NTC 08 and EU 305/2011 normatives, the rules that describe a domain MN in which certain types of structures (in our case the pylons) remain in a safe zone, and thus they are not critical and unsafe.
The system has been implemented as a website, so that users can more easily view even from home (not just locally), this allows for greater flexibility of the system, while requiring a greater number of server-side resources to carry out the necessary accounts and to manage connections and the database (which has a great number of data inside).

FEATURES

RTBM also provides access to different types of users with different roles; they could perform different tasks such as:

- view the current state
- view the historical states
- view the MN domain
- add/edit/delete users
- edit some parameters
- view some statistics
- launch the alarm

USERS

Users who can use the system are:

- **External users**
  - anyone who wants to access the site without having to log
- **Operators**
  - the persons responsible for the monitoring of the bridge
- **Engineers**
  - the persons responsible for the monitoring of the bridge and the definition of the structural model that describes the bridge and the forces acting on it
- **Administrator**
  - the person responsible for adding new users (with the right role) and for edit or delete existing users