

Theme: remote sensing and artificial intelligence

Monitoring Utilities using Satellite RS and AI

Utility companies that continuously transport their products (gas, water and electricity) depend on the good state of the network (consisting of pipes and cables) through which their products flow. A disruption in the network can lead to failure of; electricity, water or gas. The latter can lead to dangerous situations (see Fig. 1 and 2).

This network is connected to the earth's surface via constructions or it is buried in the ground. It should be clear that soil movements and the like influence the stability of the network.

The assignment described in this memo concerns the question to what extent soil movements can be related to damage to distribution networks. In other words; "If there has been a soil displacement somewhere, where did that lead to damage to the network?" And then one can predict the damage with a certain soil movement.

Soil movements can be monitored from space via satellites (see, for example, the ESA Copernicus program) and the location of a network is also fixed and can be requested via GEO ICT systems (including ESRI).

The student is expected to be able to collect the information from various systems and, on that basis, to make a solid, statically and / or scientifically founded statement.

This assignment is a collaboration between GRS and Accenture Technology.

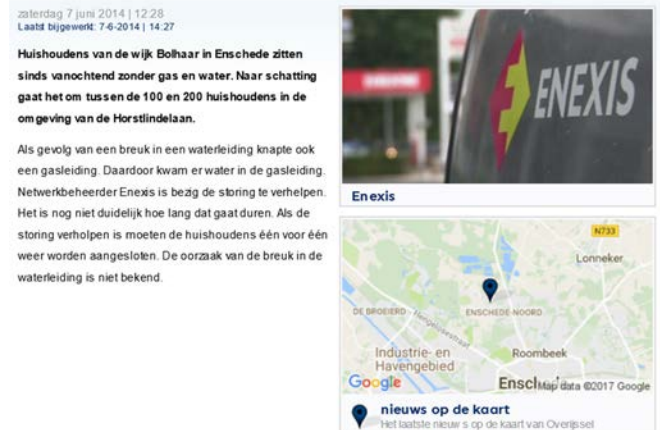


Fig. 1 News item RTV East June 2014

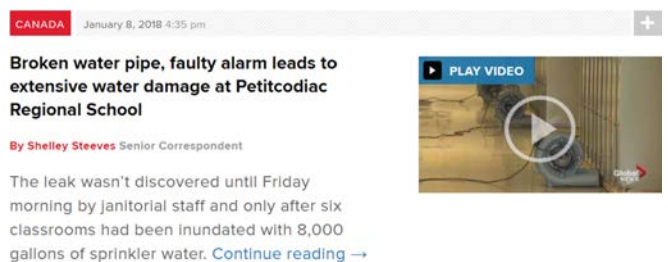


Fig. 2 News item globalnews.ca January 2018.

accenture technology

Informatie:

- Prof.dr.ir. Ramon Hanssen (R.F.Hanssen@tudelft.nl)
Room 2.13 (☎ 015-2785436)
- Ir. Hans Kruimer (hans.kruimer@accenture.com)
(☎ +31 622883059)