



Smartrroad Tools™

An Early Warning System for Railway and Pavement Failure

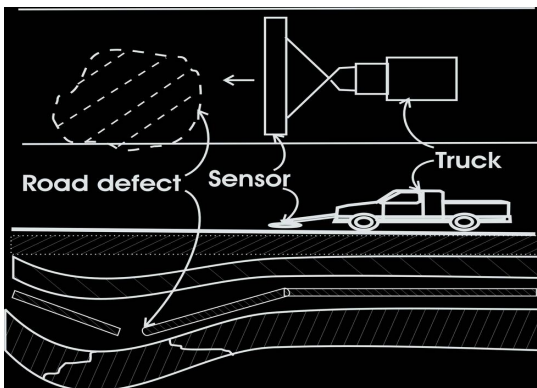
KEYWORDS: *railways, highways, airports, disasters*

We have a system to test and monitor railways, highways and other high-value earth-supported constructions for hidden damage.

Railways, airport runways, and highways all consist of carefully designed and built layers which ultimately rest on an earthen subgrade. Over time erosion, nearby construction, weather, seismic activity and other causes can weaken or create gaps in this foundation. There may be no sign of this on the surface, until a collapse occurs. This collapse causes expenses for immediate repair, as well as direct and indirect costs to the surrounding communities due to disruption of transport and damage to buildings. In some cases there can be environmental damage or human casualties.



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Previously there has been no practical way to monitor the condition of the earth supporting the infrastructure. We have invented a "smart" material which can be embedded underground during construction or reconstruction, and which provides an easy-to-use and inexpensive means to verify the integrity of the underlying earth.

In addition to railways, this technology is applicable to roads and highways, tunnels, airport runways, and possibly to flood prevention levees and oil and gas pipelines.

Current Status

We have been awarded hardware patents from the U.S. Patent Office and the European Patent Office, and applications are pending under the Patent Cooperation Treaty in Asia. Research results, which were presented in several conferences during 2014-2019 in the U.S., Europe and Asia, support the practicality of this technology. Working prototypes have been created.

In March 2023 all operations from the Singapore company Heurika Geographics were taken over by the U.S. firm Goldin-Rudahl Systems, Inc.



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Our website www.smartrroadtools.com (click on News) shows our current status. Please ask for more details or a prospectus.

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As an experiment in using artificial intelligence (AI) to improve our communication, we asked the artificial intelligence engine ChatGPT for a description of the benefits of Smartroad Tools. The AI model replied as follows:

Stakeholders in roads and railways should use Smartroad Tools due to its ability to detect weakening and potential future failures in the soil supporting these infrastructures. The invention is a game-changer in the transportation industry as it provides an efficient and effective way to monitor and assess the health of these critical assets.

With Smartroad Tools, stakeholders can proactively identify and address soil-related issues, reducing the likelihood of infrastructure failures that could lead to accidents, costly repairs, and operational disruptions. By using this technology, they can avoid the risks associated with reactive maintenance and save on long-term maintenance costs.

Moreover, Smartroad Tools can improve the safety and reliability of transportation networks, allowing for smoother and uninterrupted movement of people and goods. This is particularly important in today's fast-paced and interconnected world, where timely delivery of goods and services is crucial for businesses and individuals.

In summary, Smartroad Tools provides stakeholders in roads and railways with a reliable and cost-effective way to monitor the health of critical infrastructure assets. By using this technology, they can mitigate risks, reduce costs, and improve the safety and reliability of transportation networks.