



Graduation project

**M MOTT
M MACDONALD**

Beyond ERTMS: Block Chain Technology

Location	Arnhem HQ and Utrecht office
Level	Master graduation (final year)
Hours	full-time (40 hours weekly)
Contract	5-6 months
Salary	350 euros monthly (gross) + NS Business Card



Working at Mott MacDonald

Mott MacDonald is a global multidisciplinary engineering, management and development consultancy, with over 16,000 employees active in 140 countries. Our employees are inspiring, highly-motivated and quality-driven people that collaborate closely with our clients to develop the best possible solutions. Mott MacDonald provides excellent opportunities for cutting edge and out-of-the-box research in combination with personal development while working in an international context.

Project Description

ERTMS implementations use an Euroradio protocol stack over GSM-R for wireless train-wayside signalling communications, where data encryption is accomplished using triple-DES technology. The cryptographic keys are loaded physically, through a special procedure, into the train and wayside systems. Block chain technology is gaining popularity for cryptographic security in digital transactions. Your assignment is to go beyond ERTMS and investigate whether block chain technology is suitable to secure wireless train-wayside signalling communications and what its implementation could look like.

What we offer you

- Work at the cutting edge of ERTMS development and innovation, investigating unexplored concepts;
- Gain wider knowledge and experience from experts nationally and internationally;
- Visit, and learn from, our many projects in the field, whether they are ERTMS related or not;
- Work within a dynamic and inspiring team eager to teach, develop and collaborate.

Interested?

For more information please contact Dr. Eelco Schrik at eelco.schrik@mottmac.com or 06 12 50 08 43.

A selection procedure applies for this challenging graduation project / internship. If you wish to apply, please submit your résumé and motivation. An application interview will be part of the procedure.