



COMPANY OVERVIEW

GNSS Consulting Services

Dipl.-Ing. Norbert Schindler

POSITION YOURSELF ON THE ROAD – WITH OUR EXPERTISE

WHAT WE OFFER



We consult organizations in identifying and implementing accurate positioning solutions using Global Navigation Satellite Systems.



Photo by Anton Shkaplerov © ROSCOSMOS



European
Global Navigation
Satellite Systems
Agency

www.gsa.europa.eu

Evaluation of Horizon 2020 Galileo proposals; Review and assessment of the G-MOTIT and JUPITER projects



Alpha consult

www.alphacons.eu

Presentation of European GNSS Technologies used in Road Tolling to the Romanian Space Agency (ROSA)



www.egis-group.com/content/egis-projects

Analysis of the deployment of GNSS-based technologies in the national electronic tolling system in Poland



SKYTOLL

www.emyto.sk/en

Support of the proposal preparation in the bid for “Toll Collect”, the German GNSS-based national tolling system



www.toll-charge.hu

Evaluation of potential suppliers of tolling On Board Units having integrated GNSS, 5.8 GHz DSRC microwave, and GSM/GPRS communication modules

SCANFLEET

hugo.scanfleet.net

Support in the development of a platform for European Electronic Toll Services with international partners



ROAD INFRASTRUCTURE AGENCY
АГЕНЦИЯ ЗА "ПЪТНА ИНФРАСТРУКТУРА"

www.api.bg/index.php/en

Presentation of satellite-based technologies used in nationwide truck tolling schemes to the Bulgarian Road Infrastructure Agency (RIA)



As Global Sales Manager of the Tolling Headquarters at Siemens AG for more than 12 years, Norbert participated in the evaluation and preparation of offers for the deployment of GNSS-based technologies for electronic tolling systems in the following countries:

- Belarus
- Bulgaria
- Czech Republic
- France
- Finland
- Hungary
- Kazakhstan
- Lithuania
- Netherlands
- Poland
- Russia
- Slovakia
- Slovenia
- Sweden
- Turkey
- Ukraine
- United States
- United Kingdom

SIEMENS

- Sales activities in Hungary for a new GNSS-based platform for the HU-GO tolling system
- Sales activities in Russia for the nationwide electronic tolling system, successfully lobbying for the use of GLONASS as a core technology
- Founder and leader of a consortium for the technical and commercial response to the tender in Poland for nationwide electronic truck tolling
- Bid Manager for the electronic truck tolling tender in the Czech Republic
- Bid Manager for the “Lorry Road User Charging“ tender in the U.K.
- Publication and presentation of innovative GNSS-based tolling solutions at international congresses in Europe, Asia and North America



EDUCATION

Dipl.-Ing. Norbert Schindler



TECHNISCHE
UNIVERSITÄT
WIEN

Master of Science (Dipl.-Ing.), with
thesis in Computer Science and
Artificial Intelligence (1997)



Carnegie
Mellon
University

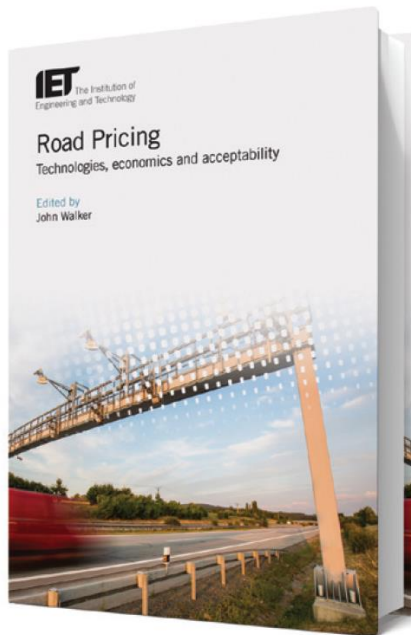
Bachelor of Science in Mathematics /
Computer Science and German, Minor
in Music (1986)



universität
wien

Undergraduate Studies in the
Liberal Arts (1984)

- 2018 “GNSS-based tolling: standards and implementations,” with Erker, E., in *Road Pricing: Technologies, economics and acceptability* (Institution of Engineering and Technology), London, pp. 403-443.



“Road pricing is increasingly being used in both developed and developing countries: in the former to combat congestion and pollution, to compensate for falling revenues from fuel duty, to improve the efficiency of the existing transport infrastructure, and to curb carbon emissions; in the latter, also to fund new transport projects. This book looks at examples around the world, the technologies implemented, how the pricing regimes have worked out and how successful the systems have been.”

Editor: Dr. John Walker

ISBN: 978-1-78561-205-3

<https://www.theiet.org/resources/books/transport/rdpri.cfm>

PUBLICATIONS

Dipl.-Ing. Norbert Schindler



- 2018 “The Birth of an Idea” (GNSS solution for Parking), *Thinking Highways*, (H3B Media), Vol 13, pp. 40-41.
- 2018 “Food For Thought” (Tolling in Bulgaria), *Interconnected 2018, Special Edition for Intertraffic*, (H3B Media), pp. 56-57.
- 2017 “Bulgária meghökentő útdíjtendere” (Amazing Tolling Tender of Bulgaria), *AutóKözlekedés*, Budapest, November 2017, pp. 14-15
- 2016 “One OBU Fits All,” *TollTrans 2016* (UKIP Media), pp. 58-39.
- 2015 “Multiple Use of GNSS On Board Units: Electronic Tolling and other Mandatory Services,” in *Proceedings 22nd World ITS Congress*, Bordeaux.
- 2015 “Extraterrestrial Encounters,” *TollTrans 2015* (UKIP Media), pp. 72-73.
- 2014 “Making the Slovak Tolling Network the Largest in the EU with the Use of GNSS Technology,” in *Proceedings 10th ITS European Congress*, Helsinki.

PUBLICATIONS

Dipl.-Ing. Norbert Schindler



- 2014 “New Hardware Platform Supporting Interoperability of European Electronic Tolling System,” with Tschulik, P., in *Proceedings 10th ITS Europ.C.*, Helsinki.
- 2013 “The Future is Now” (Cover Story) with Diani, F., *Tolling Review* (H3B Media) Vol 8, No. 4, pp. 30-33.
- 2013 “Hybrid Electronic Tolling Solution for France,” in *Proceedings 20th World ITS Congress*, Tokyo.
- 2013 “OBU for the European Electronic Tolling Service,” in *Proceedings 9th ITS European Congress*, Dublin.
- 2013 “EETS: From Theory to Reality,” with Erker, Tschulik, *ITS International* (Route One), Nov/Dec, pp. 31-32.
- 2013 “Using GLONASS to Improve Accuracy in GNSS Tolling,” *RUC Magazine* (Akabomedia), pp. 12-13.
- 2013 “French Connection,” *TollTrans 2013* (UKIP Media), pp. 82-83.

PUBLICATIONS

Dipl.-Ing. Norbert Schindler



- 2013 “A Tale of Two Worlds” (Cover Story), *Tolling Review* (H3B Media) Vol 7, No. 4, pp. 4-11.
- 2012 “Combined Use of GLONASS and GPS in Electronic Tolling,” in *Proceedings 19th World ITS Congress*, Vienna.
- 2011 “Look to the Skies,” *Tolling Review* (H3B Media) Vol 6, No. 4, pp. 56-62.
- 2010 “Theory Meets Practice,” *ETC etc* (H3B Media) Vol 5, No. 4, pp. 28-32.
- 2010 “Finding Fairness in Tolling Schemes” with Renner, A., in *Proceedings 17th World ITS Congress*, Busan.
- 2009 “A Third Weigh,” with Erker, E., *ETC etc* (H3B Media) Vol 4, No. 4, pp.16-19.
- 2009 “Fourth Generation On Board Unit for Cost-Effective Automated Electronic Tolling,” in *Proceedings 16th World ITS Congress*, Stockholm.
- 2008 “Challenging Conventional Wisdom,” *ETC etc* (H3B Media) Vol 3, No. 4, pp. 30-34.



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