Global Electronic Toll Collection (ETC) Systems Industry

Reportbuyer.com just published a new market research report: Global Electronic Toll Collection (ETC) Systems Industry

London (PRWEB) October 02, 2013 -- This report analyzes the worldwide markets for Electronic Toll Collection (ETC) Systems in US$ Million. The report provides separate comprehensive analytics for the US, Canada, Japan, Europe, China, South Korea, and Rest of World. Annual estimates and forecasts are provided for the period 2009 through 2018. The report profiles 89 companies including many key and niche players such as 3M, Atlantia SpA, CS Group, G.E.A., International Road Dynamics, Inc., Kapsch TrafficCom AG, Perceptics Inc., Q-FREE ASA, Raytheon Company, Schneider Electric, SA, Siemens AG, TRMI Systems Integration, Toll Collect GmbH, Transcore Holdings, Inc., and Xerox Corporation. Market data and analytics are derived from primary and secondary research. Company profiles are primarily based on public domain information including company URLs.

I. INTRODUCTION, METHODOLOGY & PRODUCT DEFINITIONS
Study Reliability and Reporting Limitations I-1
Disclaimers I-2
Data Interpretation & Reporting Level I-2
Quantitative Techniques & Analytics I-3
Product Definitions and Scope of Study I-3

II. EXECUTIVE SUMMARY

1. MARKET DYNAMICS II-1
Road User Charging - A Perspective II-1
Table 1: Global Road User Charging (RUC) Industry (2012):
Percentage Share breakdown of Revenues by Segment (includes corresponding Graph/Chart) II-1
Highway Tolling: A Necessity in 21st Century Highway
Maintenance & Development II-2
Electronic Toll Collection: Transforming Traditional Toll Collection Procedures II-3
The Need for Infrastructure Funding - Business Case for ETC Systems II-3
Growing Focus on ITS Deployments Augurs Well for the Market II-4
Opportunity Indicators II-4
Table 2: Growth in the Global Intelligent Transportation Systems Market: Breakdown of Compounded Annual Growth Rates (CAGR) of Annual Revenue by Country/Region for Period 2009 - 2018 (includes corresponding Graph/Chart) II-4

Table 3: Smart Transport Investments Worldwide (2012):
Percentage Share Breakdown by Sector - Traffic Management Systems, Smart Charging Systems and Others (includes corresponding Graph/Chart) II-5

PRWeb ebooks - Another online visibility tool from PRWeb
Table 4: Investments in Intelligent Transportation Systems (ITS) As a Percentage Share of GDP in Select Countries Worldwide - South Korea, Japan and the US for the year 2011 (includes corresponding Graph/Chart) II-5
The Secret of Success of ETC Projects Lies in “Concept Selling” II-5
Fiscal Cliff Concerns & European Debt Crisis Bring Mixed Bag of Opportunities and Challenges for ETC Market II-6
Outlook II-7
Developed Markets - Traditional Revenue Contributors II-7
Developing Markets to Turbo Charge Future Growth in this Market II-8
CIVETS: The Future Growth Engine II-8
Key Market Trends and Issues II-9
Tolling as Means to Reduce Road Congestion & Vehicular Pollution Drives Demand for ETC Systems II-9
Need to Avoid Lengthy Waiting Lines & Environmental Pollution at Toll Plazas to Drive Demand for ETC Systems II-9
Government Focus on Open Road Electronic Tolling: A Key Growth Driver II-10
Lower Operational Costs of ETC Systems Enable Increased Acceptance II-10
Innovation & Market Differentiation - Key Determinants for Success of ETS Projects II-10
Increased Payment Convenience for Users Propels ETC Market II-10
Roaming Arrangements Boost Effectiveness of ETC System II-11
Encouraging Use of Transponder - The Need of the Hour II-11
High-Speed Electronic Collection - Key Hurdles II-11
Violation Enforcement Imperative to Leverage True Potential of ETC Systems II-11
Measures for Enforcement II-12
Image Capture of License Plates II-12
Acquisition of Name and Address II-12
Violator Payment II-12
Legal Aspects of Toll Enforcement II-12
Electronic Toll Collection - The Privacy Factor II-13
Product Developments - The Saga Continues II-13
Emerging ETC Technologies II-14
Odometer Tolling II-14
Satellite-based Tolling II-14
Advantages II-15
Disadvantages II-15
Mobile Phone Tolling II-15
Convergence of ETC Systems With Mobile Communications: A Major Trend II-15
GPS/GSM-based Toll Collection - New Avenues in Road User Charging II-16

If you have any questions regarding information in these press releases please contact the company listed in the press release. Our complete disclaimer appears here - PRWeb ebooks - Another online visibility tool from PRWeb
Electronic Tolling Technology for Improved Traffic Management II-16
Time-of-Day Pricing II-16
Dynamic Pricing II-16
Market Share Statistics II-17
Table 5: Global ETC Transponders Market (2011): Percentage
Market Share Breakdown of Leading Players (includes corresponding Graph/Chart) II-17

2. PRODUCT OVERVIEW II-18
Electronic Toll Collection - A Prelude II-18
ETC Equipment - An Insight II-18
OBU Classification II-18
Read-only Systems II-18
Read/write Systems II-19
ETC System - Major Components II-19
Automatic Vehicle Identification (AVI) Systems II-19
Communication from Readers to Centralized Computer System II-19
AVI Technologies II-19
RFID - The Basic Technology for AVI II-19
Types of RFID Tags II-20
Active RFID Tags II-20
Passive RFID Tags II-20
The eGo™ System - TransCore’s Leading RFID Product II-20
eGo Tags II-20
eGo Readers II-20
Electronic Tags II-21
RF Tags II-21
Types of RF Tags II-21
RF Smart Tags II-21
Smart Cards Incorporating RF Transponders II-22
Roadside Antennas II-22
Roadside Readers II-22
Communication Systems II-22
Inductive-Loop Systems II-22
Optical Systems II-23
Optical License Plate Recognition II-23
Bar Coding II-23
Surface Acoustical Wave II-23
Automatic Identification of Vehicles by Plate Reading II-24
License Plate Recognition (LPR) II-24
Structure of the LPR System II-24
Plate Region Extraction II-24
Segmentation II-24
Character Recognition II-25
AVI Systems - Major Applications II-25
Automatic Vehicle Classification (AVC) Systems II-25
AVC Technologies II-25
Treadles II-25
Electromechanical Treadles II-25
Piezoelectric Treadles II-26
Optical Treadles II-26
Resistive Rubber Treadles II-26
Weigh-in-Motion Equipment/Devices II-26
Bending Plates II-26
Piezoelectric Sensors II-26
Capacitive Strip II-26
Inductive Loops II-26
Scanning Devices II-26
Laser Scanners II-27
Infrared Scanners II-27
Ultrasonic Scanners II-27
Video-based Image Processing Devices II-27
Light Beams II-27
Video Enforcement Systems (VES) II-27
VES - Key Technologies II-27
Image/Photographic Cameras II-27
Video Image Processing Systems II-28
Videotape Recording II-28
Video Based Digital Imaging II-28
Automatic Number Plate Recognition System II-28
Vehicle Positioning Systems - An Advanced Technology for ETC II-29
ETC - Implementation and Functional Challenges II-29
Costs Associated with ETC Implementation and Operation II-29
Cost to Tolling Agency II-29
Cost to the Customer II-29
Preliminary Sunk Costs II-30
Key Benefits II-30
Major Drawbacks II-30
Travel Time Data Measurement - An Overview II-30
Video Imaging II-31
Cellular Phone Tracking II-31
Electronic Distance-Measuring Instruments (DMI) II-31
Electronic License Plate Matching II-31
Toll Roads II-32
History of Toll Roads II-32
Varying Forms of Toll Operations II-32
Toll Collection Process II-33
Fixing of Toll Rate II-33
Toll Collection II-33
Violation Enforcement II-33
Accounting and Management II-33
Interoperability II-33
Various Types of Interoperability II-33
Transponder-level Interoperability II-33
Peer-to-Peer Interoperability II-34
Consolidated Operations II-34
Toll Collection Methods II-34
Manual Toll Collection II-34
Automatic Toll Collection II-34
Electronic Toll Collection II-34
Advantages of Electronic Toll Collection at a Glance II-35
Common Advantages II-35
For Users II-35
For Toll Operators II-35
Classification Based on Lanes II-35
Single-Lane ETC Systems II-35
Open Road Tolling/ Multi-Lane Free Flow ETC Systems II-35
ORT - Key Operational Issues II-36
Classification Based on Technology II-36
Dedicated Short Range Communication based ETC Systems II-36
GPS-based ETC Systems II-36
A Comparison of DSRC and GPS based ETC Systems II-37
Automatic Number Plate Recognition- based ETC Systems II-37
GSM II-37

3. RELATED TECHNOLOGIES II-38
Intelligent Transportation Systems II-38
Partners in Success - Key Enablers of Intelligent Transportation Systems II-38
Intelligent Transportation Systems - Solution for Today’s Traffic Congestion II-39
Advanced Traffic Management Systems II-39
Public Vehicle Transportation Management Systems II-40
Commercial Vehicle Operations Systems II-40
Electronic Vehicle Registration Systems II-40
EVR Applications II-41
Tachograph II-41
Tachograph Tampering II-41
Tachograph - German Regulations II-41

4. PRODUCT INTRODUCTIONS/INNOVATIONS II-42
Bosch Automotive Technology Introduces New On-Board Units for Truck Toll System II-42
Skyworks Solutions Launches Analog Solutions for Microwave and RF Detectors and Mixers II-42
Q-Free Develops ETC System II-42
Neste Oil Introduces FuelOmat Gold Automated Vehicle Identification System II-43
Purelink Technology Canada Introduces Purelink DSRC Toll Module II-43
NHAI to Introduce ETC Systems in India II-43

If you have any questions regarding information in these press releases please contact the company listed in the press release. Our complete disclaimer appears here - PRWeb ebooks - Another online visibility tool from PRWeb.
PRHTA and TransCore to Introduce ETC system in Puerto Rico II-44
Kapsch TrafficCom Consortium Launches Advanced ETC Solution II-44
VITRONIC Set to Unveil Toll Checker Freeflow Systems II-44
Ascendent ID Introduces Smallest Automatic Vehicle Identification Tag II-44
TRMI Introduces New Toll Collection System II-45
Kapsch TrafficCom Introduces Electronic Toll Collection System II-45
Peek Traffic Launches Vehicular Information Processing Software II-45
MARK IV IVHS Introduces JANUS® Multiprotocol Reader II-46
Rent A Toll Introduces Pass24® Prepaid Toll Service on San Francisco-Oakland Bay Bridges II-46

5. RECENT INDUSTRY ACTIVITY II-47
3M Acquires Federal Signal Technologies Group II-47
Road Ministry of India to Set Up Automatic Toll System II-47
North East Texas Regional Mobility Authority Selects Telvent GIT II-47
National Highway Authority of India to Implement Electronic Toll Collection System II-47
Kapsch TrafficCom Receives Order for ETC from Minister for Transport and Communication II-48
Q-Free to Takeover TCS International II-48
Q-Free Obtains Contract from Roads and Maritime Services II-48
Mihajlo Pupin Institute Announces Implementation of Toll Collection System in Hercegovina and Bosnia II-48
Kapsch TrafficCom Australia Obtains Contract from Interlink Roads for Implementing Open Road Toll System II-49
Egis Projects Takes Over Transpass II-49
Aselsan Electronic Industry Obtains Electronic Toll Collection System Contract II-49
Louisiana Department of Transportation and Development Signs Settlement Agreement with Electronic Transaction Consultants II-49
Federal Roads Maintenance Agency to Implement Cashless Electronic Tolling System II-50
Sri Lanka to Implement Electronic Toll System II-50
Federal Signal Technologies and Litum Technologies Secure Contract from Vendeka Bilgi Teknolojileri for ETC System II-50
United Toll Systems Receives Contract from Avtodor II-50
Kapsch TrafficCom Obtains Order from ASCENDI II-51
TRMI Systems Integration Receives Contract for Implementing ORT System II-51
ACS Implements New ETC System in Los Angeles County Highway II-51
Affiliated Computer Services Secures Contract from Maryland Transportation Authority II-52
Kapsch TrafficCom Consortium Deploys viaToll Electronic Toll Collection System in Poland II-52
Puerto Rico Expands ETC Infrastructure II-52
Federal Signal & Kapsch Enter Into a MOU II-53
Accenture Implements the Commercial Back Office System For Ascendi II-53
TagMaster North America Introduces New HR-2 Handheld Reader II-54
TagMaster Collaborates with Siemens Mobility for Selective Vehicle Detection in Traffic management system Solution II-54
Steria Partners with Neology for RFID Solutions II-55
Siemens Powers Reserved Toll Lane Project in Israel II-55
FSTech Concludes the Lanes Systems Upgrade Project in Southern California II-55
Ecotrans to Adopt Eurotoll’s Electronic Toll Collection Service II-56
Federal Signal Acquires Sirit Inc II-56
Kapsch Acquires Mark IV II-57
FSC Takes Over VE Systems II-57
Punj Lloyd and Hopetech Sign MOU for Electronic Toll Collection II-57
Ausol Autopistas Chooses Transcore’s Road Toll Collection Technology II-57
Kapsch Wins Bid for BrisConnections’ Tolling System II-58
HTA Signs Agreement for Providing Video Tolling Services to ACO II-58
CS Acquires License for Idris Software of DCS II-58
TransCore Wins State Wide Contract for RFID Systems II-58
Kapsch Specifies Operation Cost of Gauteng ORT II-58
International Road Dynamics Signs Agreement with PSI Technologies II-59
Federal Signal to Establish Federal Signal Technologies Group II-59

6. FOCUS ON SELECT GLOBAL PLAYERS II-61
3M (US) II-61
Atlantia SpA (Italy) II-61
CS Group (France) II-62
G.E.A. (France) II-62
International Road Dynamics, Inc. (Canada) II-62
Kapsch TrafficCom AG (Austria) II-63
Perceptics Inc (USA) II-63
Q-FREE ASA (Norway) II-63
Raytheon Company (USA) II-64
Schneider Electric, SA (France) II-64
Siemens AG (Germany) II-64
TRMI Systems Integration (USA) II-65
Toll Collect GmbH (Germany) II-65
TransCore Holdings, Inc (USA) II-65
Xerox Corporation (USA) II-65

7. GLOBAL MARKET PERSPECTIVE II-67
Table 6: World Recent Past, Current & Future Analysis for Electronic Toll Collection (ETC) Systems by Geographic Region - US, Canada, Japan, Europe, China, South Korea and Rest of World Markets Independently Analyzed with Annual Sales in US$ Million for Years 2009 through 2018 (includes corresponding

If you have any questions regarding information in these press releases please contact the company listed in the press release. Our complete disclaimer appears here - PRWeb ebooks - Another online visibility tool from PRWeb
Table 7: World 10-Year Perspective for Electronic Toll Collection (ETC) Systems by Geographic Region - Percentage Breakdown of Market Share for US, Canada, Japan, Europe, China, South Korea and Rest of World Markets for the Years 2009, 2012, and 2018 (includes corresponding Graph/Chart) II-68

III. MARKET

1. THE UNITED STATES III-1
A. Market Analysis III-1
   Outlook III-1
   ETC - An Overview III-1
   21st Century Tolling - A US Perspective III-1
   HOT Lanes III-2
   HOT Lanes Pricing III-2
   Frequency of Pricing Modifications III-2
   Corridor Segmentation III-3
   Implementation of HOT Lanes - Key Challenges III-3
   Express Toll Lanes III-3
   Electronic Toll Collection in the US - Varying Modes of Implementation III-3
   ETC Systems Bring Significant Efficiency in Traffic Management III-3
   Interoperability - A Key Issue III-4
   Major ETC Tag System Deployments in the US and Interoperability III-4
   History of Toll Roads in the United States III-4
   Limited Access Highways III-5
   Setting High Standards III-5
   Interstate Highway System III-5
   Toll Financing III-5
   Shunpiking III-6
   Electronic Tolling in the US - Development Over the Years III-6
   E-ZPass - A Key ETC Systems in Use III-6
   Working of E-ZPass System III-7
   PrePass Plus Implemented in Ohio III-7
   Key Statistical Finding III-8
   Table 8: US Market for DSRC Technology Based ETC Systems (2012 & 2017): Percentage Share Breakdown of Revenue by Product Segment (includes corresponding Graph/Chart) III-8
   Product Introductions III-8
   Strategic Corporate Developments III-10
   Select Players III-16
B. Market Analytics III-19

Table 9: US Recent Past, Current & Future Analysis for Electronic Toll Collection (ETC) Systems - Analyzed with
Annual Sales in US$ Million for the Years 2009 through 2018 (includes corresponding Graph/Chart) III-19

2. CANADA III-20
A. Market Analysis III-20
Outlook III-20
Toll Roads - A Perspective III-20
Toronto 407ETR - A Major ETC Equipped Toll Road III-20
Product Launch III-20
Strategic Corporate Developments III-21
Select Player III-22
B. Market Analytics III-23
Table 10: Canadian Recent Past, Current & Future Analysis for Electronic Toll Collection (ETC) Systems - Analyzed with Annual Sales in US$ Million for the Years 2009 through 2018 (includes corresponding Graph/Chart) III-23

3. JAPAN III-24
A. Market Analysis III-24
Outlook III-24
ETC - An Overview III-24
Market Penetration III-24
Japan Reverses Toll Free Programs to Generate Funding III-25
Discounts and Subsidies Fuel Adoption of Transponders III-25
Single National System III-25
Electronic Toll Collection for Motorcycles III-25
Working Mechanism of Motorcycle ETC System III-26
Significant Promotional Incentives to Boost Motorcycle ETC Usage III-26
ITS in Japan - A Perspective III-26
ETC System Development III-26
B. Market Analytics III-27
Table 11: Japanese Recent Past, Current & Future Analysis for Electronic Toll Collection (ETC) Systems - Analyzed with Annual Sales in US$ Million for the Years 2009 through 2018 (includes corresponding Graph/Chart) III-27

4. EUROPE III-28
A. Market Analysis III-28
Tolling - A Key Source of Additional Finances for Governments III-28
ETC Systems Market in Europe III-28
Table 12: Breakdown of Number of Toll Stations, Toll Lanes, ETC Lanes, and ETC Subscribers by Country as of 2011 III-29
ETC Technologies Adopted III-29
Major ETC System Deployments by Select Countries in Europe III-30
Electronic Toll Collection in Europe - Future Direction III-30
Interoperability Directives III-30
If you have any questions regarding information in these press releases please contact the company listed in the press release. Our complete disclaimer appears here - PRWeb ebooks - Another online visibility tool from PRWeb.
A. Market Analysis III-40
Current & Future Analysis III-40
Outlook III-40
GPS Tolling System III-40
Using the Toll System III-40
Making Payments III-41
System Enforcement III-41
Security and Data Protection III-41
Laws on Route-based Toll Collection in Germany III-41
Product Introductions/Innovations III-41
Key Players III-42

B. Market Analytics III-43
Table 16: German Recent Past, Current & Future Analysis for
Electronic Toll Collection (ETC) Systems - Analyzed with
Annual Sales in US$ Million for the Years 2009 through 2018
(includes corresponding Graph/Chart) III-43

4c. ITALY III-44
A. Market Analysis III-44
Outlook III-44
Overview III-44
Atlantia SpA - A Key Italian Player III-44
B. Market Analytics III-45
Table 17: Italian Recent Past, Current & Future Analysis for
Electronic Toll Collection (ETC) Systems - Analyzed with
Annual Sales in US$ Million for the Years 2009 through 2018
(includes corresponding Graph/Chart) III-45

4d. SPAIN III-46
A. Market Analysis III-46
Current & Future Analysis III-46
B. Market Analytics III-46
Table 18: Spanish Recent Past, Current & Future Analysis for
Electronic Toll Collection (ETC) Systems - Analyzed with
Annual Sales in US$ Million for the Years 2009 through 2018
(includes corresponding Graph/Chart) III-46

4e. AUSTRIA III-47
A. Market Analysis III-47
Current & Future Analysis III-47
Overview III-47
Product Introductions III-47
Kapsch Trafficcom Ag - A Key Austrian Player III-48
B. Market Analytics III-49
Table 19: Austrian Recent Past, Current & Future Analysis
for Electronic Toll Collection (ETC) Systems - Analyzed with
Annual Sales in US$ Million for the Years 2009 through 2018

If you have any questions regarding information in these press releases please contact the company listed in the press release. Our complete disclaimer appears here - PRWeb ebooks - Another online visibility tool from PRWeb.
(includes corresponding Graph/Chart) III-49

4f. PORTUGAL III-50
A. Market Analysis III-50
Current & Future Analysis III-50
Strategic Corporate Developments III-50
B. Market Analytics III-51
Table 20: Portuguese Recent Past, Current & Future Analysis for Electronic Toll Collection (ETC) Systems - Analyzed with Annual Sales in US$ Million for the Years 2009 through 2018 (includes corresponding Graph/Chart) III-51

4g. REST OF EUROPE III-52
A. Market Analysis III-52
Current & Future Analysis III-52
Focus on Select European Markets III-52
Czech Republic III-52
Norway III-52
United Kingdom III-52
Electronic Toll Collection - Major Installations III-52
London Congestion Charge Scheme III-53
Main Objectives of the Scheme III-53
History of Toll Roads in the UK III-53
Turnpike Roads and Formation of Turnpike Trusts III-54
Improvement in Road Quality III-54
Decline of Turnpike Trusts III-54
Product Introductions III-54
Strategic Corporate Developments III-55
Select Players III-58
B. Market Analytics III-59
Table 21: Rest of Europe Recent Past, Current & Future Analysis for Electronic Toll Collection (ETC) Systems - Analyzed with Annual Sales in US$ Million for the Years 2009 through 2018 (includes corresponding Graph/Chart) III-59

5. CHINA III-60
A. Market Analysis III-60
Outlook III-60
B. Market Analytics III-60
Table 22: Chinese Recent Past, Current & Future Analysis for Electronic Toll Collection (ETC) Systems - Analyzed with Annual Sales in US$ Million for the Years 2009 through 2018 (includes corresponding Graph/Chart) III-60

6. SOUTH KOREA III-61
A. Market Analysis III-61
Current & Future Analysis III-61
Overview III-61
B. Market Analytics III-61
Table 23: South Korean Recent Past, Current & Future Analysis for Electronic Toll Collection (ETC) Systems - Analyzed with Annual Sales in US$ Million for the Years 2009 through 2018 (includes corresponding Graph/Chart) III-61

7. REST OF WORLD III-62
A. Market Analysis III-62
Outlook III-62
Asia-Pacific ETC Deployments - A Review III-62
Major ETC System Deployments by Select Countries in Asia-Pacific III-62
Select Markets - A Review III-63
Australia III-63
Hong Kong III-63
India III-63
Electronic Toll Collection in India III-63
Government Plans to Replace Manual Tollbooths with ETC Systems III-64
Government to Allocate Increased Funds to PWDs for Road Projects III-64
Indonesia III-64
Malaysia III-64
Singapore III-64
Taiwan III-65
Brazil III-65
Major ETC System Deployments by Select Region/City in Brazil III-65
Mexico III-65
South Africa III-66
Product Launch III-66
Strategic Corporate Developments III-66
B. Market Analytics III-72
Table 24: Rest of World Recent Past, Current & Future Analysis for Electronic Toll Collection (ETC) Systems with Annual Sales in US$ Million for the Years 2009 through 2018 (includes corresponding Graph/Chart) III-72

IV. COMPETITIVE LANDSCAPE

Total Companies Profiled: 89 (including Divisions/Subsidiaries - 96)

The United States (28)
Canada (7)
Japan (6)
Europe (33)
-France (7)
-Germany (6)
-The United Kingdom (2)
-Italy (4)
-Rest of Europe (14)
-Asia-Pacific (Excluding Japan) (17)
-Latin America (1)
-Middle-East (2)
-Africa (2)

Read the full report:

Global Electronic Toll Collection (ETC) Systems Industry

http://www.reportbuyer.com/transport_travel/roads/global電子_toll_collection_etc_systems_industry.html#utm

For more information:
Sarah Smith
Research Advisor at Reportbuyer.com
Email: query@reportbuyer.com
Tel: +44 208 816 85 48
Website: www.reportbuyer.com
Contact Information
Sarah Smith
Research Advisor at Reportbuyer.com
+44 208 816 85 48

Online Web 2.0 Version
You can read the online version of this press release here.