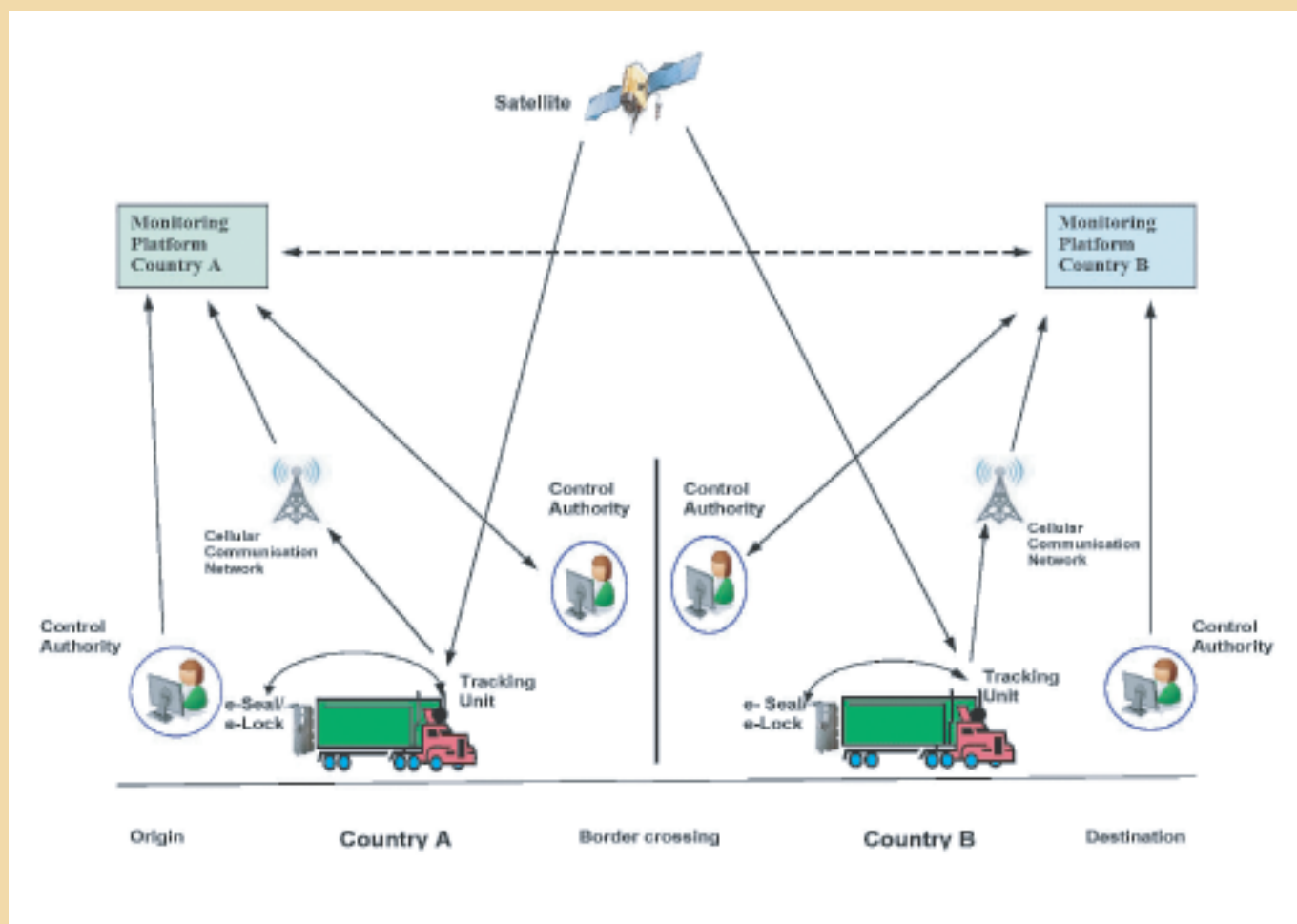
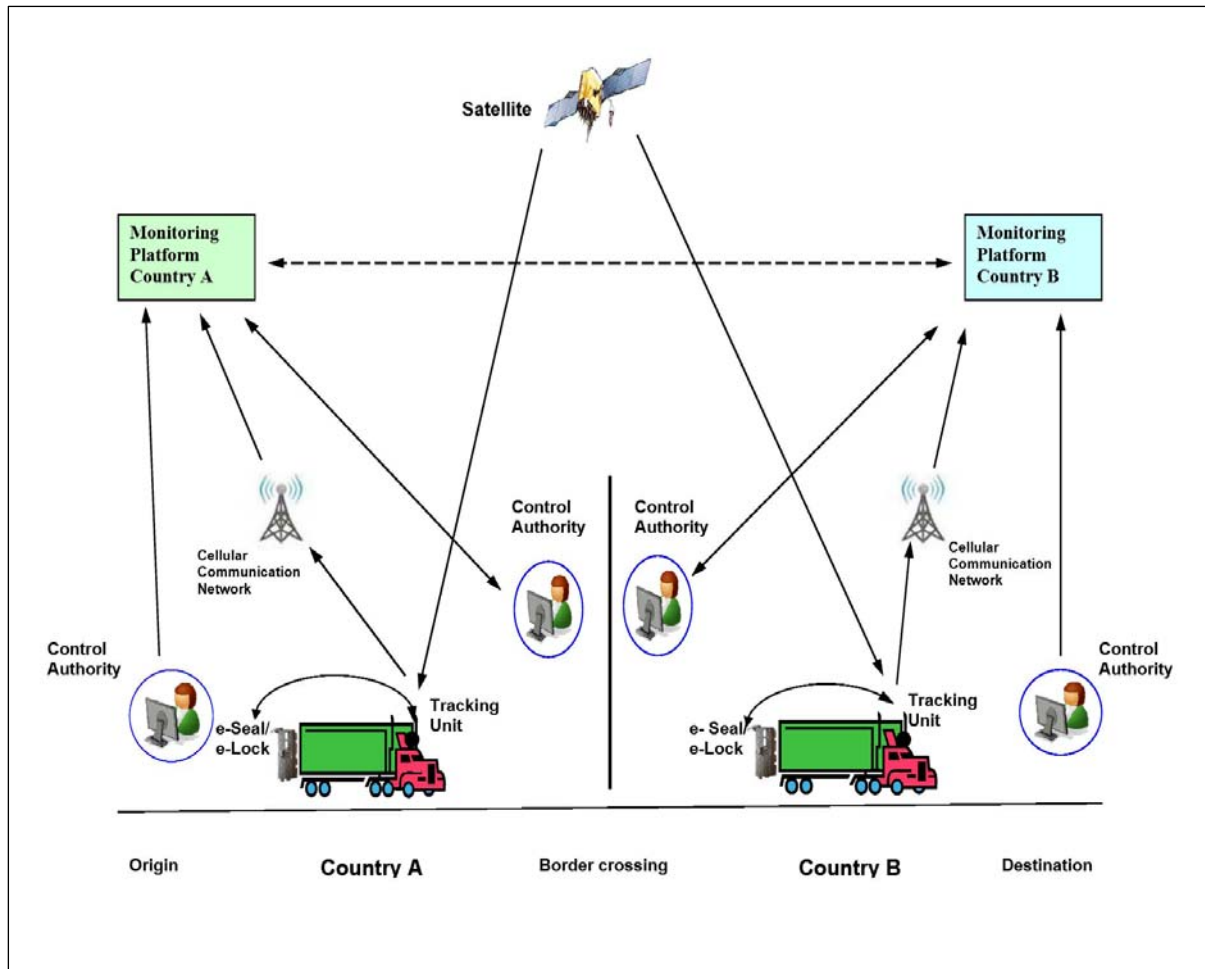


# SECURE CROSS BORDER TRANSPORT MODEL



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#### **ACKNOWLEDGEMENT**

The present publication was prepared by Transport Division, ESCAP, with assistance of Mr. Anusorn Lovichit, Managing Director, TIFFA EDI Services Co. Ltd., as a consultant for the study of this Model. The study was managed by Mr. Sandeep Raj Jain, Economic Affairs Officer, Transport Facilitation and Logistics Section, Transport Division, ESCAP, under the guidance of Mr. Li Yuwei, Chief of the Section.

The study extensively benefited from the visits made by the ESCAP secretariat to the Shenzhen Customs, China, the Department of Transport of Quang Tri Province, Viet Nam, and the Lao Bao Special Commercial Economic Zone, Lao Bao, Viet Nam. The assistance provided by these organizations and their officers for the study is duly appreciated.

Acknowledgments are also extended to the staff of Transport Division, who provided peer views on the publication.

The study was made under a project entitled “Deepening Asian Connectivity-Capacity Building for Trade and Transport Facilitation through ICT Development”, which was jointly implemented by Trade and Investment Division, Transport Division, and ICT and Disaster Risk Reduction Division, ESCAP.

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## **I. BACKGROUND**

The rise in intra-regional trade has led to increased demand for international road transport in the region. International road transport, however, faces numerous non-physical barriers that impede the smooth and efficient movement of goods, people and vehicles. Major barriers are the lack of opening of domestic routes for international transport and restrictions on foreign vehicles and goods in transit due to concerns about security, safety, smuggling, trafficking and loss of revenues from diversion of goods in transit to local markets. Such barriers cause high costs and excessive delays in international road transport.

Developments in information and communication technologies (ICT), satellite positioning systems (SPSs), cellular communication systems (CCS), radio frequency identification (RFID) technology, geographical information systems (GIS) and advances in web based software with visual graphics and other user friendly features, offer a tremendous potential to deal with major challenges in cross-border transport. Combined use of these technologies can secure and track vehicles and goods in real time, thereby allowing control authorities to take timely action.

Many countries in the region are using either part or all of these technologies to address various aspects of transport. For example, China and Viet Nam have made installation of an SPS device compulsory for vehicles transporting dangerous goods and passengers. Electronic seals (e-Seal) are being used extensively to secure and track the movement of containers in China, the Republic of Korea and Thailand. The Customs authorities in Shenzhen, China, Hong Kong, China and Thailand are using tracking systems based on these technologies to facilitate the movement of bonded goods between the Customs zones and for transport of containers from inland places to border crossings.

In view of the above, the purpose of the Secure Cross-Border Transport Model (hereinafter referred to as 'the model') is to provide a tool for developing a secure, smooth and efficient system for cross-border movement of goods and vehicles. The system may help alleviate the concerns of the control authorities and allow them to provide a more facilitated environment for cross-border transport.

The model combines the experience from the existing use of the new technologies for domestic transport and logistics with the needs of cross-border transport. It attempts to standardize main features of key devices and inter-action of the devices as well as ways for an electronic tracking system for vehicles and goods in cross-border and transit transport to work. The model can be used as a conceptual design for development of a system. Through this, the model will promote wider applications of the electronic tracking system in cross-border and transit transport, and thus support the further development of such transport operations in the region.

The model is being developed under an inter-Divisional project of ESCAP entitled “Deepening Asian Connectivity-Capacity building for trade and transport facilitation through information and communication technology (ICT) development” which was jointly implemented by Trade and Investment Division, Transport Division, and ICT and Disaster Reduction Division, ESCAP. The model is also a part of the initiatives under the Regional Strategic Framework for the Facilitation of International Road Transport (RSF) that was adopted by the Ministerial Conference on Transport held in Bangkok in March 2012.

The model will be updated periodically based on the improvements in the technologies used for the application of the model and/or any other related technological innovation that facilitates cross-border movement of goods and people, while meeting the requirements of the control authorities.

## **II. REVIEW OF THE EXISTING SYSTEMS FOR SECURE MOVEMENTS OF GOODS AND VEHICLES**

### **A. Secure Free Zone Project in Thailand**

In 2006, TIFFA<sup>1</sup> EDI Services Co., Ltd., a value added network provider, partnered with a team of Singapore-based engineers (currently with Ascent Solutions) to launch a Secure Free Zone project. The project was supported the Royal Thai Customs, and sponsored by the Western Digital (Thailand) Co., Ltd., (WD).

The purpose of the project was to facilitate movement of Customs bonded goods among the free trade zones located around Bangkok. WD worked with the Royal Thai Customs and TIFFA EDI Services Co., Ltd. to design and deploy the electronic cargo tracking system. The project has been implemented in phases. Phase 1 of the project provided electronic cargo tracking and surveillance between the free trade zones, namely Nava Nakorn Industrial Estate, Hi-Tech Industrial Estate and Bang Pa-in Industrial Estate. Phase 2 linked the Suvarnabhumi International Airport with Hi-Tech Industrial Estate. Phase 3 will track cross-border movement of goods between Malaysia and Thailand.

The surveillance of the transport process begins with the WD warehouse staff keying in the details of the consignment, such as the shipment order number, transport information, routing data e-Seal number and other pertinent logistics information into the web application

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