RFID to Enhance Environmental Protection & Sustainability

Ensuring Legality in the Tropical Timber Supply Chain

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Who am I
- Nigel Dore( nigel.dore@helveta.com )
- Chief Technology Officer of Helveta

What we do
- Helveta provides software solutions for resource mapping, asset tracking, chain of custody management and verification of legal origin to the forestry and agribusiness industries
- Head office near Oxford, England
- Develops the CI World software platform
Global deforestation and illegal logging are vast, unchecked problems and major contributors to greenhouse gas emissions

- 6m hectares of tropical forest are cleared annually
- Tropical deforestation accounts for 18% - 25% of total human-caused greenhouse gas emissions
- Illegal logging represents a significant contributor to deforestation – in some countries it is estimated to be up to 90%
- The World Bank estimates that the illegal timber trade costs governments US$15 billion p.a. in lost assets, revenues and taxes
Strong regulatory drivers for change

- US Lacey Act amended in 2008 to make it illegal to import and trade in illegally harvested wood
- EC draft framework regulation released in 2008 with similar aims for the EU
- EU FLEGT initiative to establish Voluntary Partnership Agreements (VPAs) with producer nations to ensure that only legally harvested timber is imported
- An increasing number of countries are adopting "green" public procurement policies requiring timber and timber products to be from legal and sustainable sources
Technology is important to the solution

- Ensuring timber legality involves monitoring the chain of custody from “tree to table”
- Paper systems have proven ineffective and open to abuse
- Electronic systems can provide confidence and security
- RFID tags or barcodes are used for asset identification
TREE INVENTORY STARTS WITH AFFIXING BARCODE OR RFID DEVICE

PDA WITH GPS

LOG-IN SCREEN

CAPTURE MODE SELECTION

DATA ENTRY

INVENTORY DISPLAY

Session One

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The chain of custody is defined and managed in the software.

Data is collected from and reconciled across all control points. Issues are identified via reports or alerted in real-time.

Issue investigation by inspectors in the field is controlled by workflow.

Finally, legality or export certificates are issued.
Liberia case study

- Forests cover 30% of Liberia
- Previously, up to 20% GDP from forestry
- Timber was a major contributor to 14 years of brutal civil war
- LiberFor – An online national wood tracking system is now in place

LiberFor - project timeline

- 2003 - End of civil war, UN Security Council ban on timber export
- 2006 - All former forest concessions cancelled, enactment of new forestry law
- 2007 - Contract for implementation of national chain of custody monitoring system for Liberian timber flows awarded to SGS & Helveta
- 2008 - Start of 5-year implementation project ($1.6m USAID grant)
- 2009 - Legal harvesting begins - peaceful and legal benefits from forests start to flow to the Liberian people
Lessons learned from RFID pilots

- Difficult to locate suitable RFID tags – tags designed for timber pallets did not prove durable in tropical forest

- Limited read/write memory in cost effective tags limits innovation in RFID solutions

- The addition of an independent printed code on tags would ease handling issues and failed tag recovery

- Cost and lead times of RFID readers for handheld computers proved an issue

- Read range needs careful management when capturing details of individual logs