SGS INVESTOR DAYS 24 – 25 OCTOBER 2013 USA

SGS USING/TESTING GPS

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Investor Days, 24-25 October 2013

WHEN YOU NEED TO BE SURE

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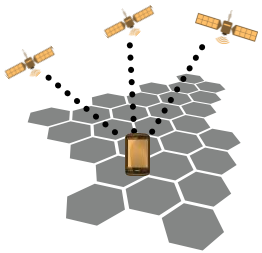
SGS TESTING GPS



CONSUMER GOODS & RETAIL

Conformance Testing

- All conformance testing is repeated for all 2G, 3G and 4G technologies supported by the mobile device. GSM, CDMA, WCDMA and LTE cellular networks are simulated for exchange of satellite data information and data.
- Testing is performed using test equipment to simulate the GPS network, Cellular network and assistance server functionality. This testing is completed using a cable to connect the mobile device to the test equipment.

Over the Air(OTA) Testing

- OTA is a measure of the overall mobile device performance in a radiated environment including the device antenna. This testing will evaluate the device performance in a “live” environment.

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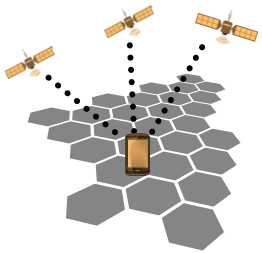
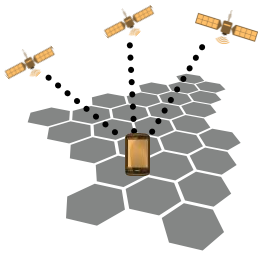


CONSUMER GOODS & RETAIL

- SGS controls if the GPS device will interfere other nearby devices while it is in operation.
- These testing items are voluntary:
  - TIS (Total Isotropic sensitivity)
  - Location Accuracy
  - (TTFF) Time to First Fix
  - Bit Error Rate
  - Acquisition time.

SGS TESTING GPS



CONSUMER GOODS & RETAIL

- Handheld/body worn GPS device with/without map (outdoor usage, sports).
- Automotive GPS device with street map (car navigation).
- Aviation/Maritime GPS device to show the latitude and longitude.
- Tracker : GPS + various kind of transmitter, that can transmit the current location to others.

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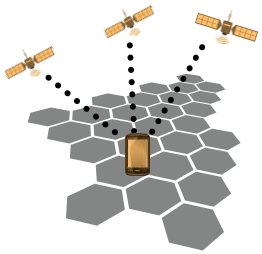

CONSUMER GOODS & RETAIL

- Tom-tom, via OEM Quanta
- Garmin
- Trimble
- GES
- Globalsat
- Daviscomm (Singapore)
- Laipac
- SGL

SGS USING GPS

LOGISTICS

- High requirement of traceability (for gov. operators).
- Traceability comes in two flavors:
  - Where have the assets been – relevant time
  - Where are the assets right now – real time.
- Increasing need for real-time positioning of assets.
- GIS is extremely well suited to take advantage of this and provide Governments with state-of-the-art solutions.

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LOGISTICS

- Electronic Cargo Tracking System for trucks and containers in transit:
  - Fully operational in Ghana, Kenya and Tanzania
  - Ensures integrity of goods in transit using GPS / GPRS and RFID.
- Forestry monitoring:
  - Fully operational in Liberia, DRC, Cameroon
  - Ensures full traceability of wood from felling to export.
- Fuel truck monitoring:
  - Fully operational in Kenya
  - Electronic sealing of tanker trucks and monitoring of discharge process.
    Real-time tracking.

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CARGO TRACKING

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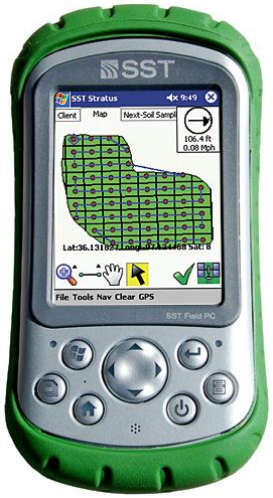
AGRICULTURE & FOOD



- GPS technology is increasingly used in our Agriculture & Food services for:
  - Precision agriculture – Variable rate technology to optimise yields, minimise inputs and protect the environment
    - Fertilizers
    - Seed rate/density
    - Plant protection products
    - Irrigation.
  - Market research – Confirmation of the geographical representativeness of the survey and mapping of the results.
  - Field trials – Location in farmers' fields and compliance (declaration to the authorities).
  - Inspection & audit – Confirmation where samples have been taken and audits have taken place.
  - Yield verification – Guinness World Record attempts.

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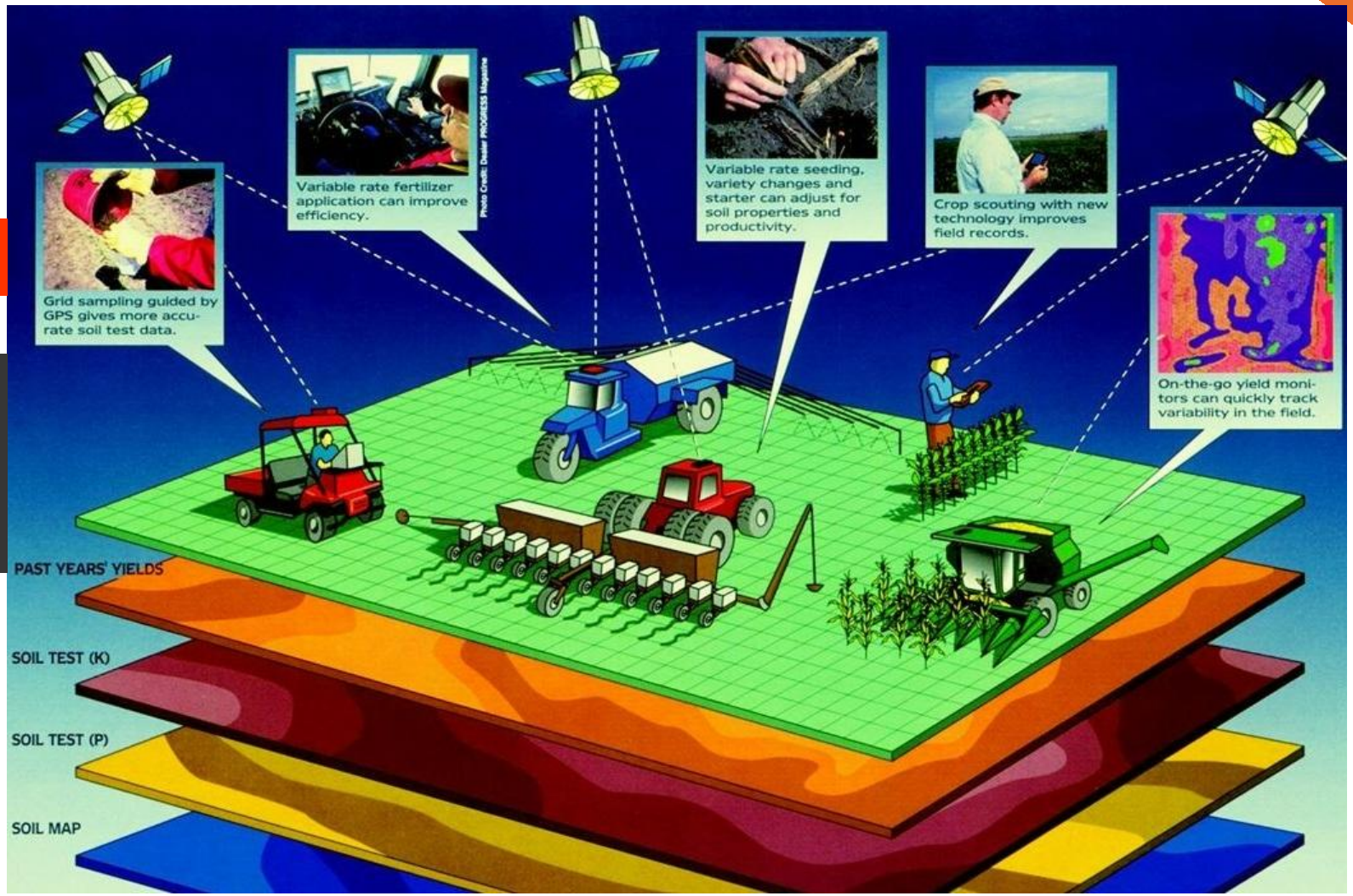
AGRICULTURE & FOOD

PRECISION FARMING



Ref: gps4us

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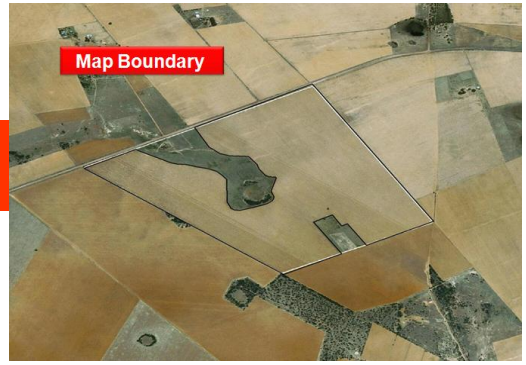

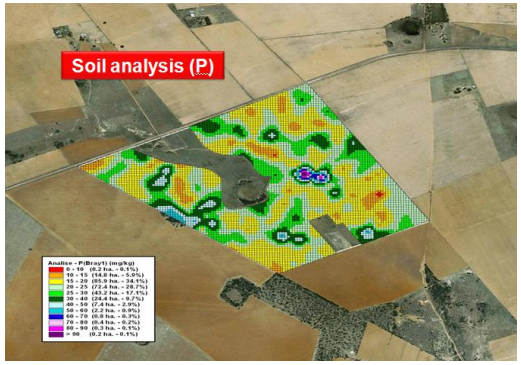

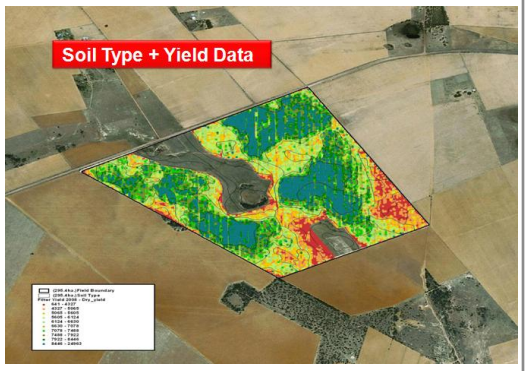

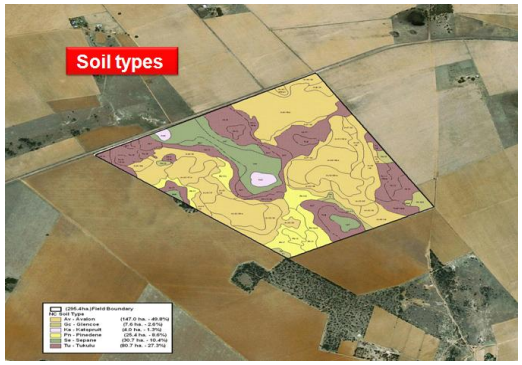

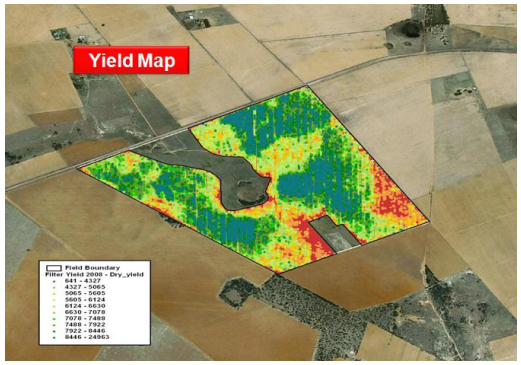

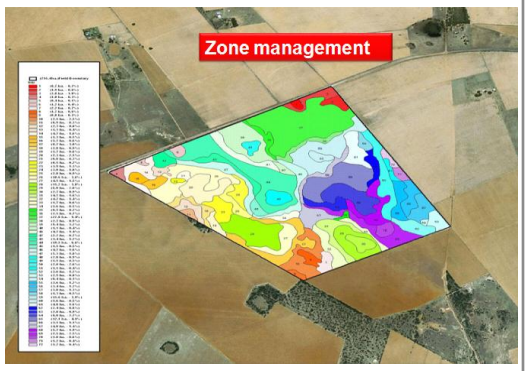

➲ MAPS BASED ON GPS USE DURING SOIL CLASSIFICATION, SOIL SAMPLING AND HARVESTING

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USA

2014
FOR THE COMPLETE PICTURE

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