



IAP - Amazon Project

Leigh Cornock – Product Development

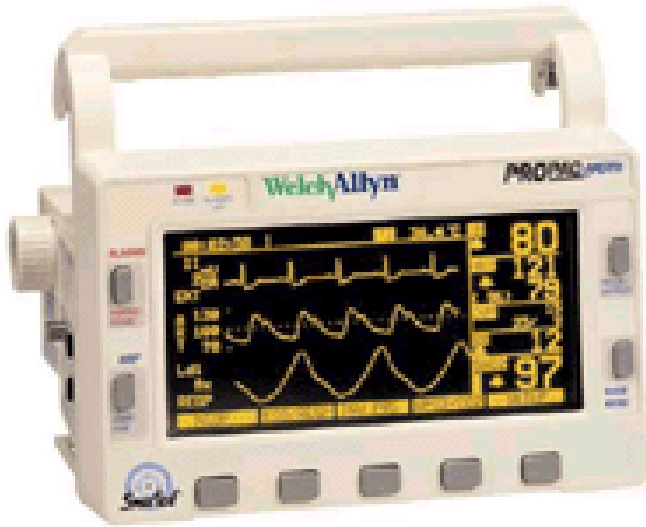
www.rdtltd.com



Content

- **Background to the Amazon Project**
- **What is the Tempus system**
- **Application case study**

Current Medical Monitoring



- Vital Signs Monitors
 - Relatively commoditised in form and function
 - Designed primarily for hospital use
 - Limited data connectivity

Current Telemedicine



- Telemedicine Systems
 - Designed for niche applications
 - No significant commercial usage in wider pre-hospital care applications (civilian and military)

The Amazon Project

- Amazon concept:
 - Provide a system which provides dual-use capability
 - For users who need a basic monitor 90% of the time
 - And cannot justify an extra (and expensive) separate product for occasional telemedicine applications
 - Such as International SOS, military, civilian ambulance etc.
 - Extend commercial usability through satcoms and GPS

The Tempus IC™



- Designed under a previous ESA project:
 - Designed to be a niche telemedicine product but with the flexibility to extend it into wider applications
 - Already commercially successful in commercial/civil aviation and luxury maritime
 - Wide range of parameters and communications
 - Small, light, robust, portable
 - More flexible platform – USB!!

ESA Involvement

- Helped fund and develop Tempus IC 2006 - 2008
 - Both RDT and ESA are pleased with the system's commercial success
- RDT applied to ARTES 20 open call
 - ESA's presence enables projects for SME's like RDT to gain faster traction with larger corporations
 - ESA act as a force to drive user involvement at all stages



The Amazon Project



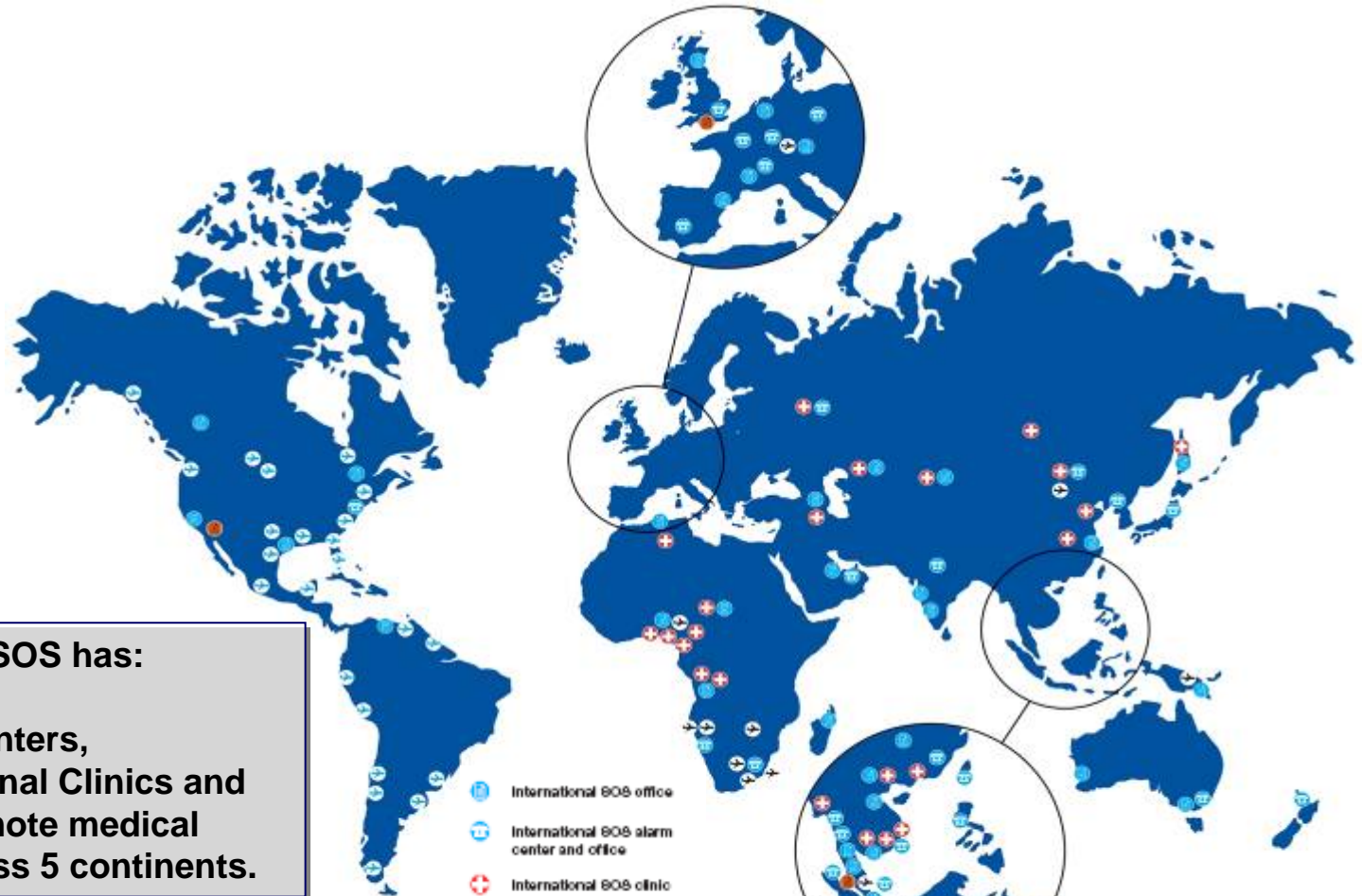
- Two organisations working within the project consortium
- Aims to bring some of the advanced medical data technologies out of the hospital and into the pre-hospital care environment
- To be used by existing service providers in civilian and military applications

International SOS' Experience and Expertise

- Over 20 years experience
- Over 6,000 employees worldwide
- Medical, security, aviation, and technical specialists:
 - 33% are medical professionals,
 - Multi-lingual staff, over 90 languages and dialects are spoken
- Experts in each center manage and audit a global network of medical correspondents and hospitals



International SOS' Worldwide Reach



International SOS has:

- 63 Offices,
- 26 Alarm Centers,
- 27 International Clinics and
- over 400 remote medical facilities across 5 continents.

Map not to scale

What is the **Tempus** System?

- This project utilizes space assets for the transmission of key medical data from the aircraft to the ground:
 - Transmits a full range of vital signs
 - Allows multiplexed two way voice communication
 - Enables transmission of real-time moving video



Tempus IC Professional - Medical Parameters



Blood Pressure



Pulse Oximetry



Temperature



Capnometry



3 Lead EKG monitoring
12 lead EKG recording



Glucometry



Video Laryngoscope



Ultrasound for Fast Exam

Tempus IC Professional - USB Ultrasound

- Small compact Tempus powered ultrasound probe
- Gives completely new capability from same host system



USB Video Laryngoscope

- View vitals including Capnograph whilst getting video image from Laryngoscope
- Gives completely new capability from same host system



Tempus IC Professional Communications

Wireless



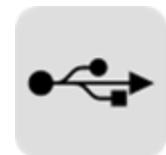
Serial



Modem

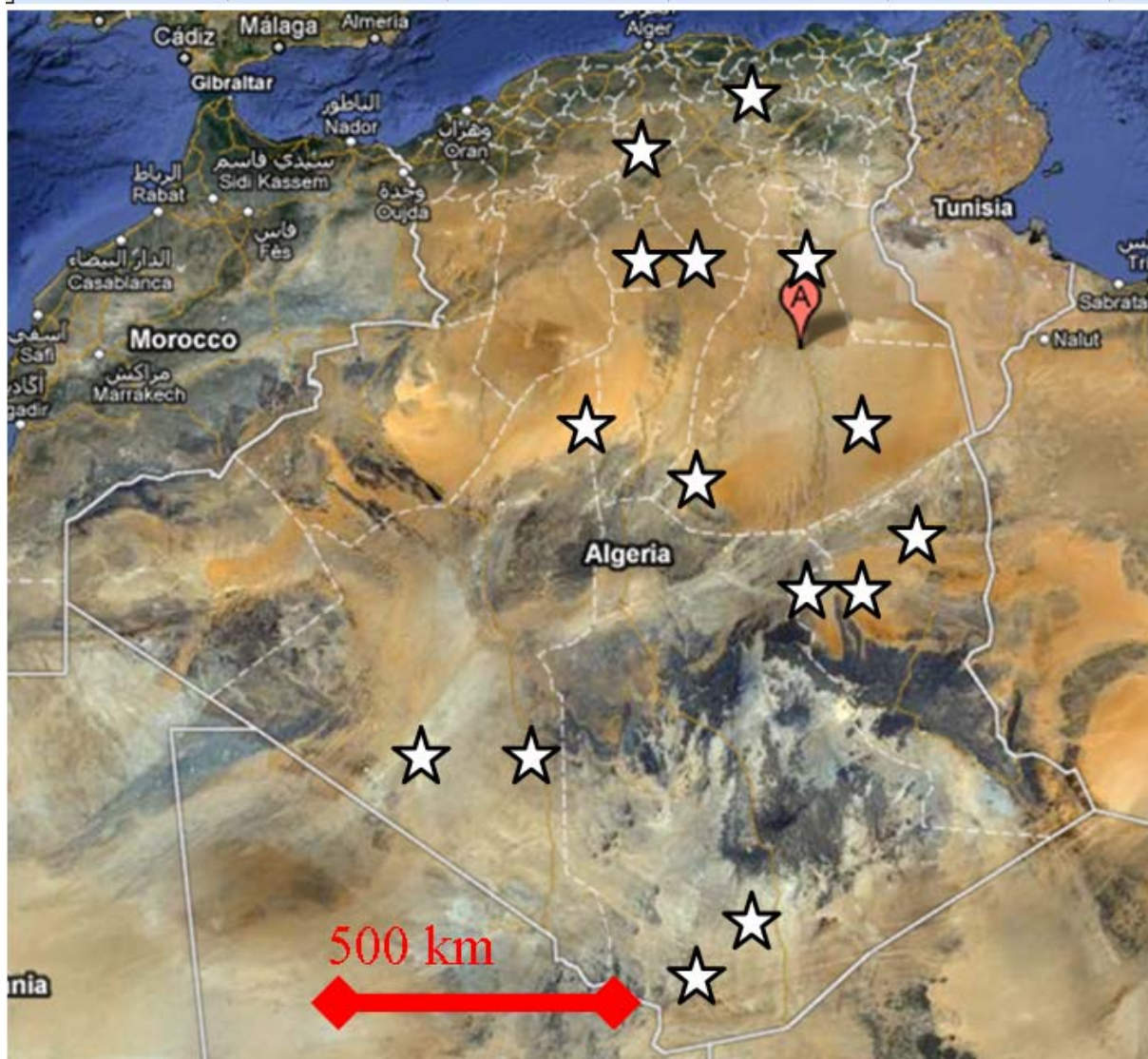


Ethernet



USB

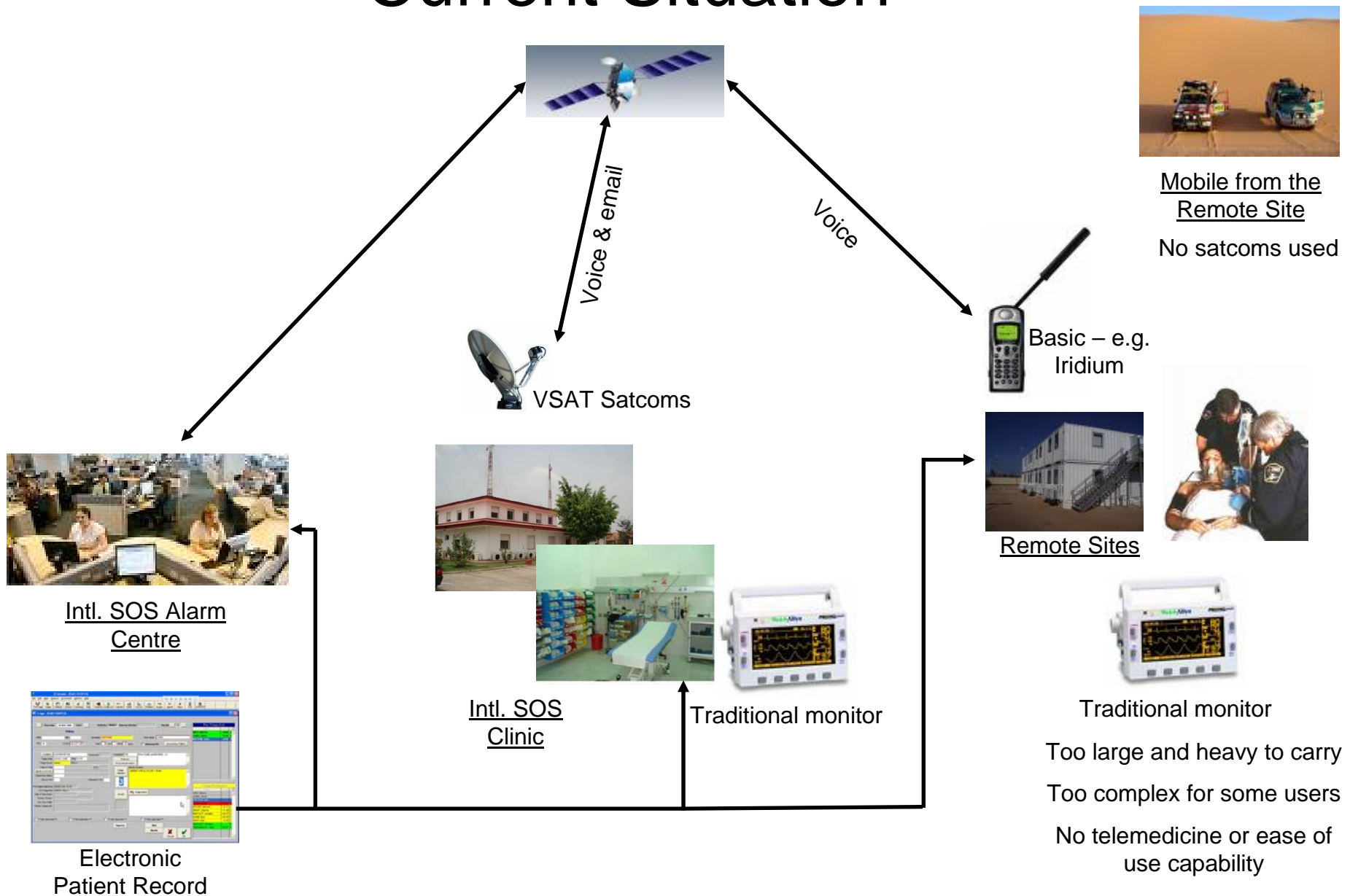
Tempus IC Professional Application case study



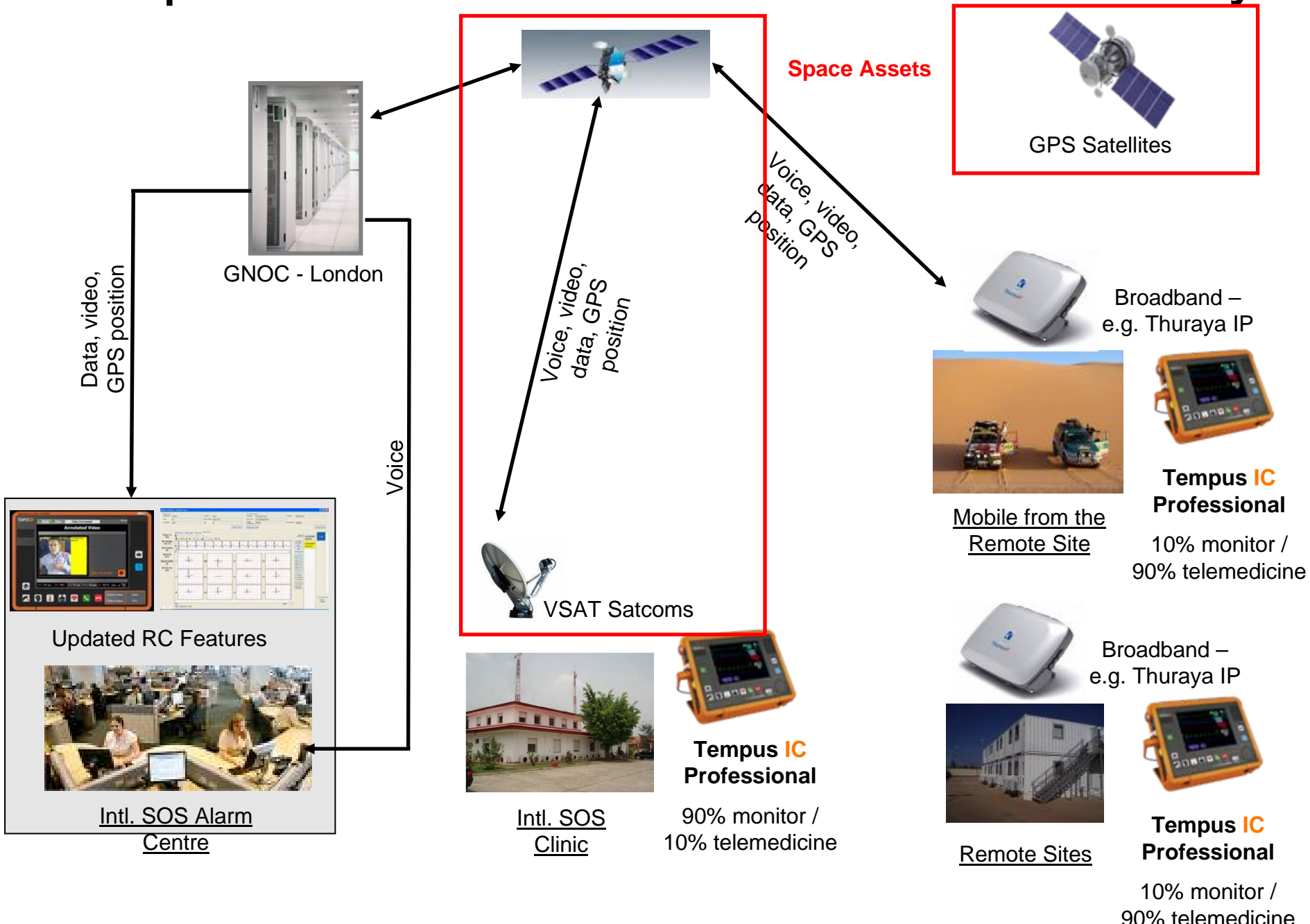
ISOS - Algeria

- A = Clinic
- ☆ = Sites

Current Situation



Proposed Service Architecture Summary



Trials and Timeline

- Project started in November 2009
- Closure is expected in Q3-Q4 2011
- Three trials
 - 1 short (1 week) in the EU e.g. Paris, October 2010
 - 2 long (6 weeks) in Nigeria and Algeria, July 2011
- Alarm centre to be located in Paris with London perhaps being used also
- Trials will demonstrate full system functionality and test the key elements of the business case
- As lead user Intl. SOS will lead the gathering of user requirements, field trials and contribute to the validation of the service concept / architecture



Outcomes

- Outcomes are being assessed using a tool being developed (separately) by ESA (ASSIST project)
- The output of the project will be a marketed end-product
 - Commercial benefits essentially are being able to get more from the same investment in resource
- RDT expect:
 - Positive engagement and feedback from users
 - Commercial traction in various remote markets (oil, gas, mineral extraction, bulk crude shipping etc.)
 - Significant commercial traction in the military markets



Summary

- The Amazon project is building on the technical and commercial success of a previous ESA funded project
- The system will be unique in focussing on pre-hospital care and remote applications
- It will provide a wide number of entirely new features and benefits – all of which are entirely user driven
- We expect the end product to be a commercial success in a number of markets and have already made significant development Military markets



Contact

Leigh Cornock – lcornock@rdtltd.com

Chris Hannan – channan@rdtltd.com

+44 (0)1256 362400

www.rdtltd.com

