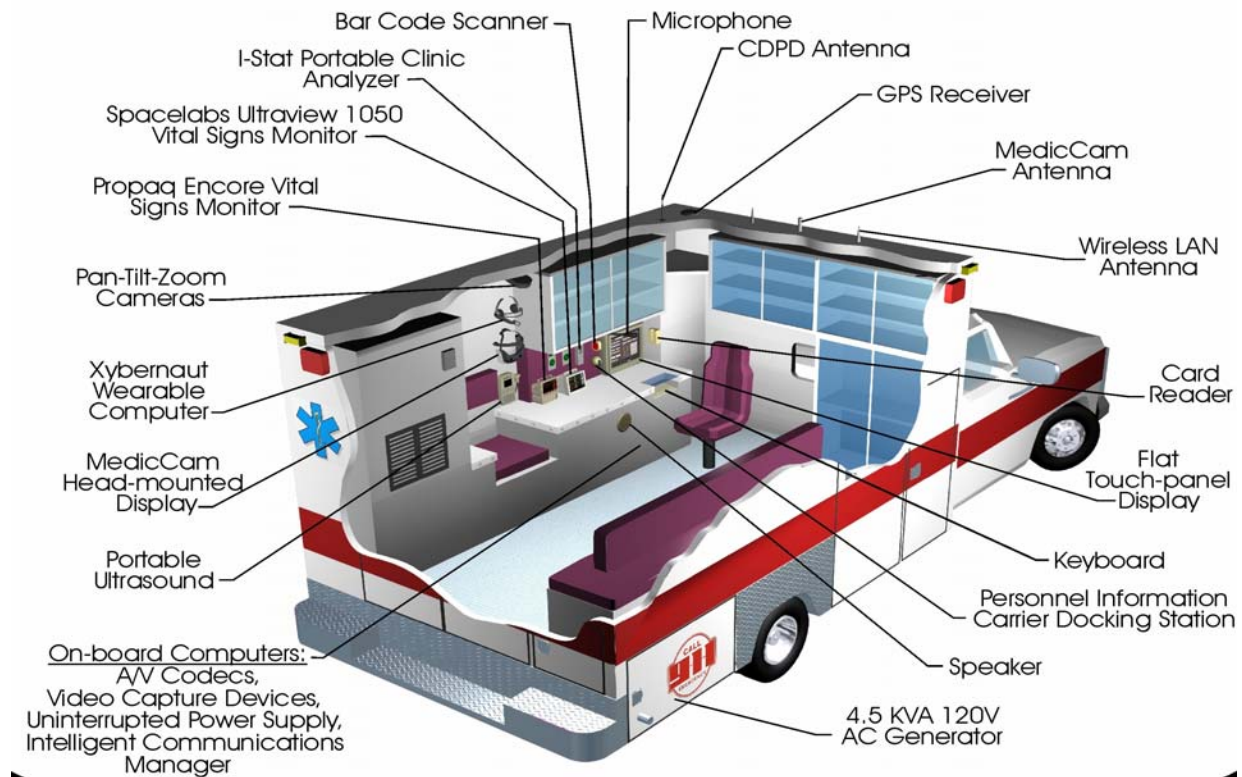
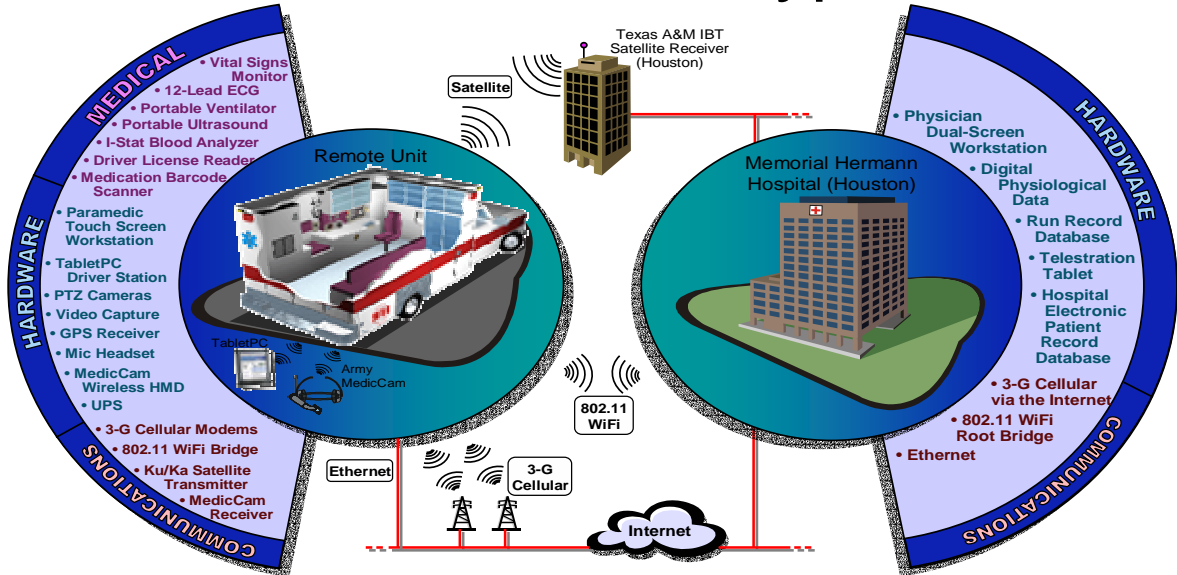


Ambulance transport is often a frightening experience for both the patient and the health care providers. Monitoring vital signs and detecting a change in patient condition are challenging, sometimes leading to a delay in treatment or worse. Dr. Jim Walls demonstrated the Disaster Relief and Emergency Medical Service (DREAMS™) “the response vehicle of the future”, an ambulance with state-of-the-art communications capability. DREAMS™ is a partnership of Texas A&M University, the University of Texas Health Science Center of Houston, and the US Army Medical Research and Materiel Command. Three video cameras can be directed remotely, like from the receiving Emergency Department. Extensive monitoring data is likewise transmitted in real time. Voice and data communications create a virtual presence of the physician at the bedside. The newest prototype vehicle, being used in rural Liberty County, Texas, was available for conference participants to inspect. These innovations essentially put the patient in the Emergency Department at the start of his ambulance ride!



**Diagrammatic view of the Disaster Relief and Emergency Medical Services (DREAMS) vehicle of the future. This future is available today!**

# Current Prototype



**Network connectivity of DREAMS vehicle.**

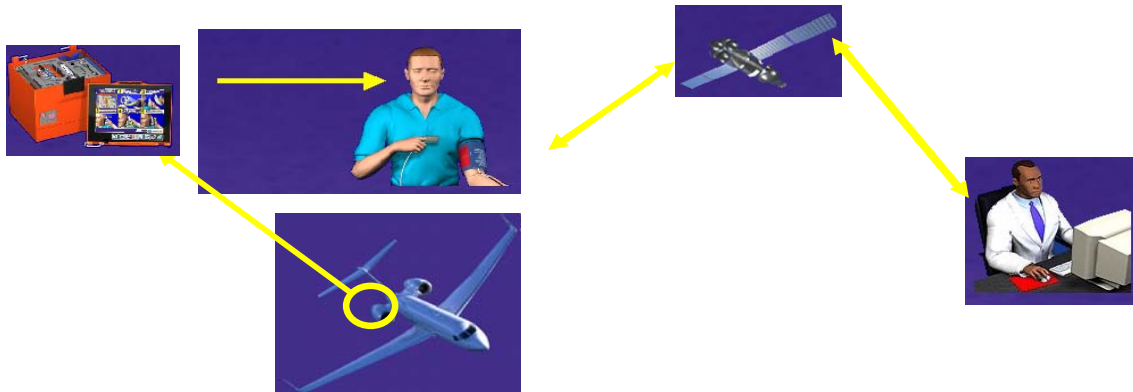
\*\*\*\*\*

Likewise, significant advances in patient monitoring during flight have been made. Pascale van Nouhuys from Remote Diagnostic Technologies Ltd of the United Kingdom ([www.rdtltd.com](http://www.rdtltd.com)) discussed the Tempus telemedicine device, which provides two-way voice and data transmission via in-flight telephone. Designed for non-expert operator in the aircraft, this system can greatly improve in-flight diagnosis and treatment of medical emergencies.

# How Tempus works

**Allows transmission of medical data, voice & video from any remote location to a medical expert at another location**

→ For example, from an aircraft using the in-flight telephone system and a non-expert operator

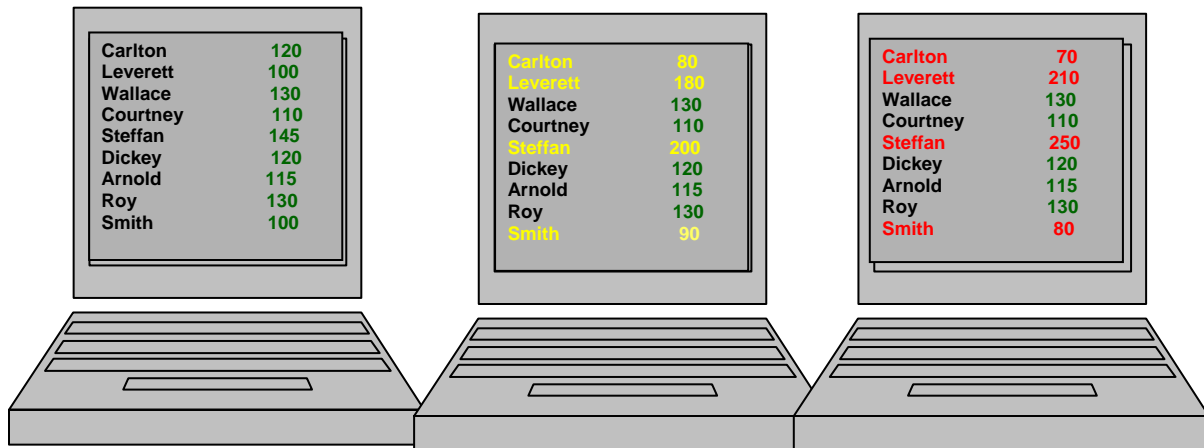


**This system is flying today, saving lives on air borne flights.**

\*\*\*\*\*

Secure email for communicating medical and patient information would be a significant step forward in both peacetime and disaster response medical care. There is substantial new public law requiring that health care personnel closely guard patient identifying and medical information. Medical Digital Courier (MedDC™) from Technology Applications International of Ft Worth, Texas ([www.taitexas.com](http://www.taitexas.com)) demonstrated their innovative software for encoding email and using their system for managing the care of complicated patients, like diabetics. During disasters, communication is critical, and this system may add substantially to the medical response capability. This would enable disease management activities a great deal. With computer aided graphics and email we expect a disease manager to multiply the number of patients they can manage.

# Patient Reported Blood Sugar



**Green -**  
All Normal

**Yellow -**  
give instructions

**Red -**  
take action

**Color coding computer response for disease management should multiply the number of patients any disease manager can effectively handle.**