

Spartanburg Regional Healthcare System



Leveraging the WiFi Network for RTLS

RFID @ SRHS

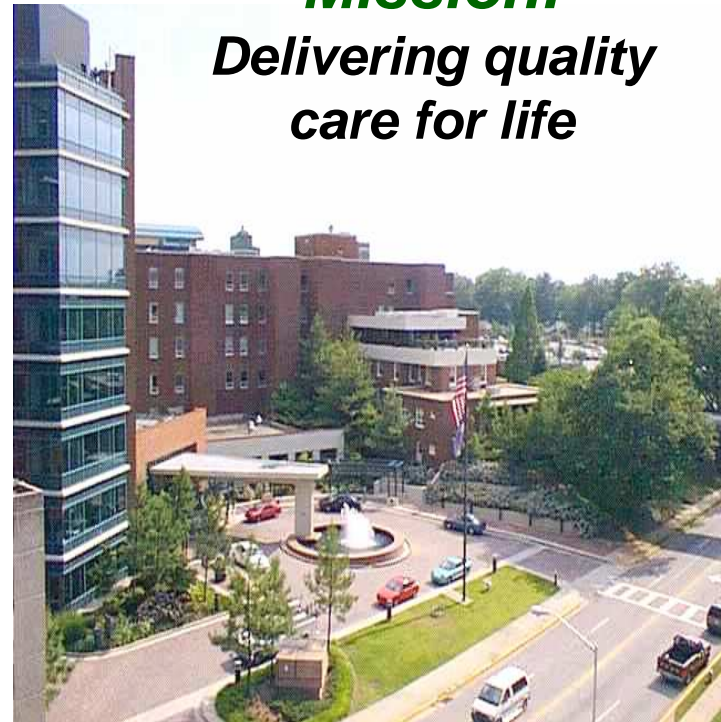
March 28, 2007

Spartanburg Regional Healthcare System

Integrated Delivery System

- 2 hospitals, 588 licensed beds
- Magnet Award for nursing excellence
- Top 100 Heart Center
- Cancer center
- 38 physician offices
- Teaching hospital
- Freestanding ambulatory surgical centers

Mission:
***Delivering quality
care for life***



SRHS Information Systems Accomplishments

- Over past 4 years, named as one of the **100 Most Wired** healthcare systems in the U.S. for the use of technology for patient care and safety
- Won **Chairman's Achievement Award** from McKesson Corporation by creating great value through the installation and integration of McKesson products and services and willingness to share experience with others
- **DOD North America Hospital of the Future**



Patient Safety Investment

- 2000, SRHS, Implemented Alaris Medley™ Medication Safety System with Guardrails® Safety Software house wide
 - Customized limits for IV drug administration

Results:

- Improved patient safety
- Improved nursing satisfaction



Common Challenge

- IV pumps often time went **unaccounted** for during annual audits
- 37 IV pumps did not receive **required annual software** updates because they could not be found
- Nursing and support staff spends **hours daily searching** for critical assets such as IV pumps
- **Utilization** of mobile asset could not be determined

Missing Assets Exposure

- Missing IV Pumps could lead to **delay or unavailability** of critical patient safety equipment
- Missing IV Pumps need to be replaced (**purchased or leased**) for critical patient care (37 IV pumps @ \$10k = \$370,000)
- If a pump does not turn up after annual software update, it will be **out of compliance**, and **threaten patient safety**
- Frustration in searching for mobile assets can lead to **poor job satisfaction** with clinical staff
- **Non compliance** with SOX during audits

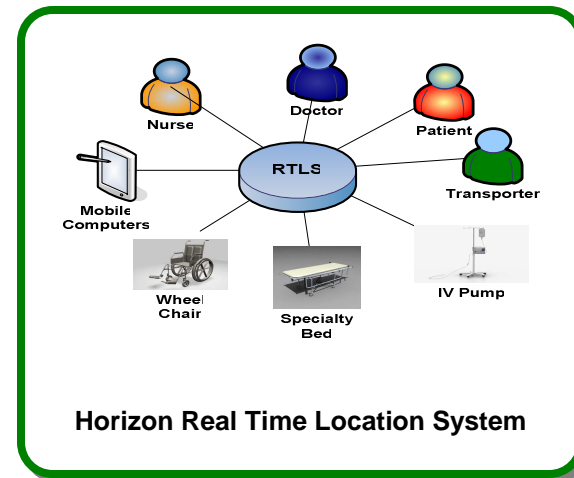
Organizational Needs

Solution Objectives:

- Ability to **locate items** in real time
- Ability to **view historical activity** on mobile asset usage
- Ability to **leverage existing investments** in 802.11 wireless infrastructure
- Quick and **non invasive** to deploy
- Ability to **control equipment cost** (utilization, loss prevention)
- Most importantly - **improve patient safety and patient care** by keeping track in “real time” of the assets and equipment available in the hospital

RTLS – Business / Content Rules

- Common service technology that can be used to track people and mobile assets in a healthcare setting.
- Provides real time and historical location information of tagged items.
- Rules and Alerts
 - Geo Fence Concepts
- Leverages our existing 802.11



Benefits:

- Improved throughput
- Increased patient safety
- Increased asset utilization

Teamed Results

- Short non invasive deployment cycle
- Utilized our new Cisco LWAP 802.11 wireless architecture
- Tracking 550 IV pumps within a 15 foot radius
- Materials Management department reports a surplus of pumps waiting for deployment
- Trending information now available such as:
 - Under used pumps (utilization)
 - Pumps movements – pump pile ups
 - High demand versus low demand units
- Nursing has immediate access to patient critical IV pumps that have the latest software

Benefits of 802.11 Deployment

- Non Invasive Deployment
 - Infection Control
- Leverage Existing Infrastructure Investment
- Single point of management
- Ability to use existing mapping engines

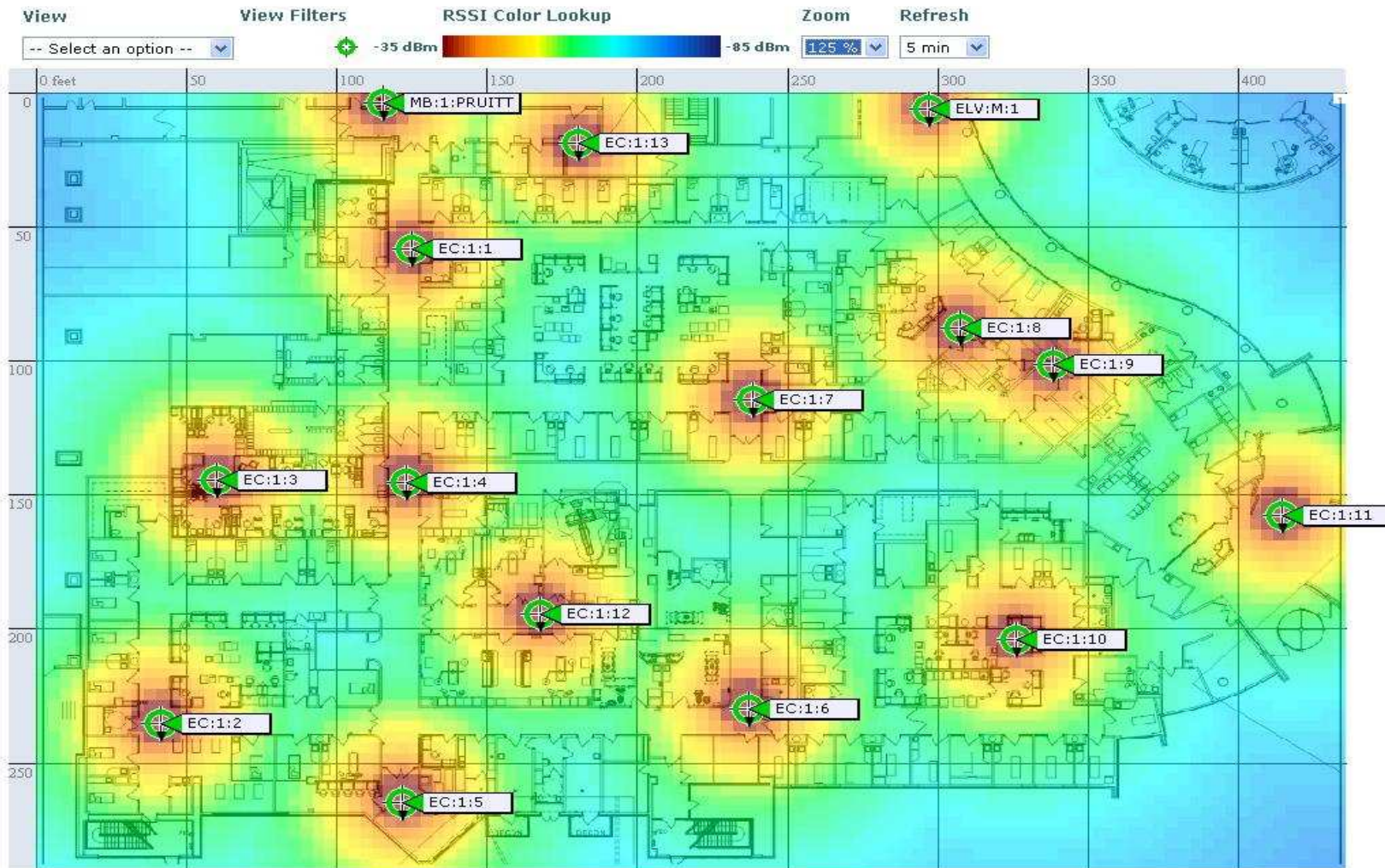
Supporting WiFi Infrastructure

- Cisco WiSM Modules (resident in 6500's)
- 340 LWAPP Access Points (still growing)
- Tuned AP RF power levels
- HIPPA compliant encryption algorithms

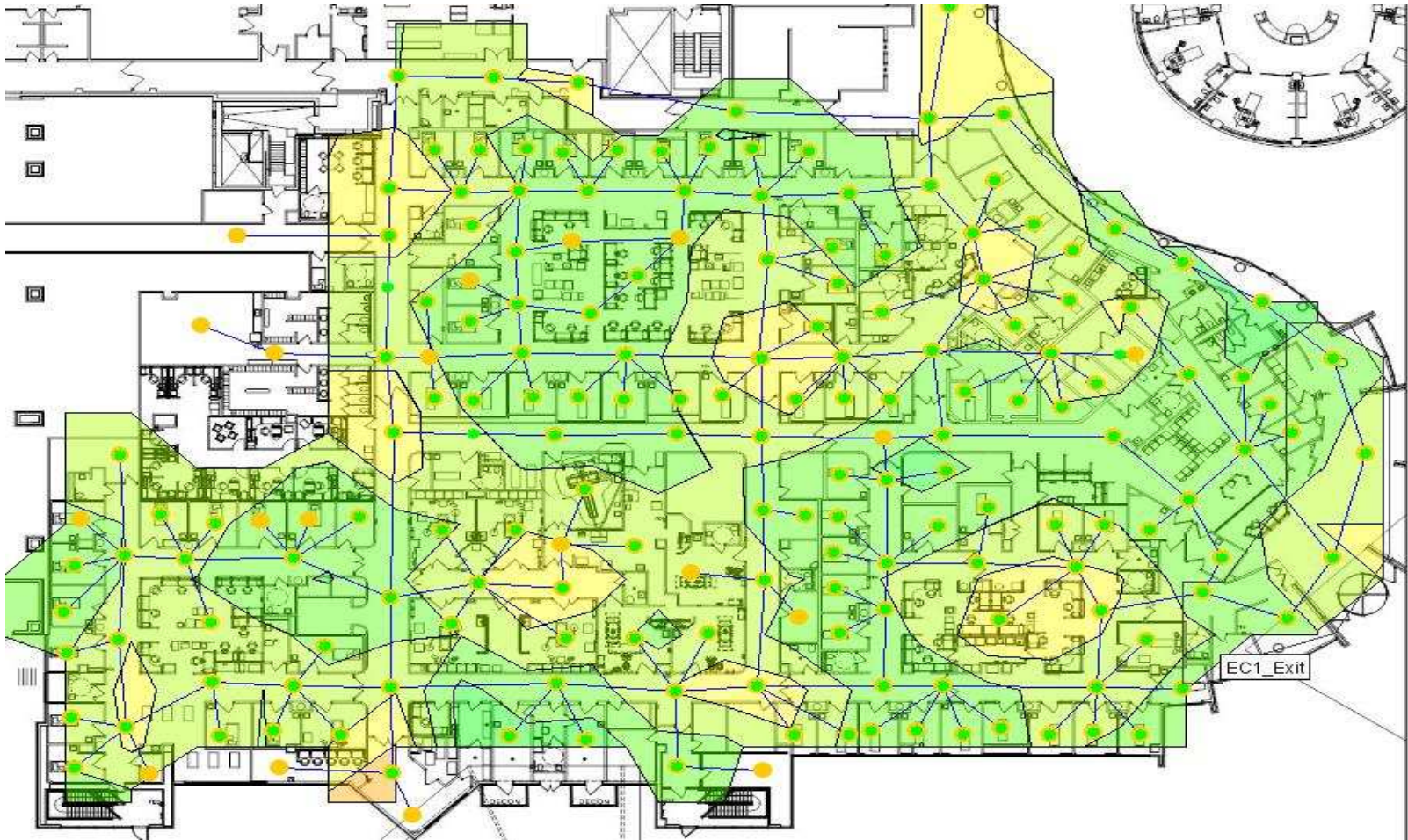
SRHS EC WiFi Infrastructure

Maps > Emergency Center > EC1

-- Select a command --



SRHS Ekahau Location Engine



Map Copyright: Xerox
SPARTANBURG
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Emergency Center Today



Emergency Center Tomorrow



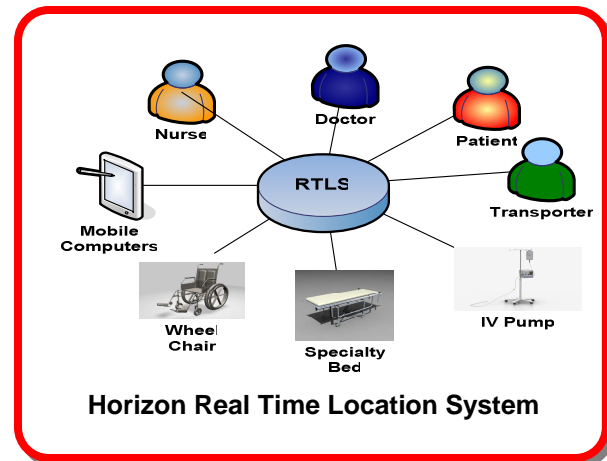
Maximize Your Place
SPARTANBURG
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What's Next @ SRHS?

- Reduce rental cost by tracking unused rental bed and specialty equipment
- Utilizing RTLS data (patient and staff tracking) in our Horizon Surgical Manager solution to enhance throughput
- Enhance visibility in the ER with RTLS data into Horizon Emergency Care solution.
- RFID into the supply chain @ SRHS
- Other assets identified by 'RTLS Committee'



More technologies that improve quality, safety and efficiency



For Additional Information

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