

Integrated Point-of-Care Information and Entertainment System



Overview:



MEDIVista™ from Lincor Solutions is an integrated solution for the delivery of digital entertainment, communication and clinician services to the patient bedside. MEDIVista™ has been developed in response to the increasing demand from healthcare providers and hospital administrators worldwide for entertainment and communication solutions which enhance the patient experience, reduce staff workload and deliver real-time decision making information at the point of care.

Services Delivered:

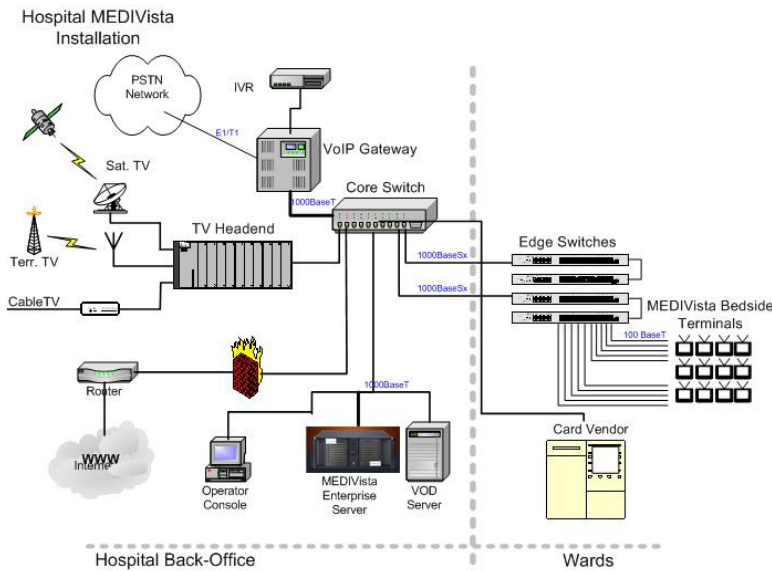
MEDIVista™ delivers a range of services either fully digitally or using some analogue services depending on the requirements of a particular installation. The services include:

Entertainment	Communications	Information	Clinical Services*	Hospital Services
<ul style="list-style-type: none"> • TV (analogue or digital) • Radio • Movies-on-demand • Audio books • Games 	<ul style="list-style-type: none"> • Telephone (digital or analogue) • Internet • e-Mail • SMS 	<ul style="list-style-type: none"> • Physician Directories • Patient Education • Program guides • Religious services • Patient Survey's 	<ul style="list-style-type: none"> • Electronic Medical records • Clinical decision support • Medication Management • Diagnostic display(Laboratory & Radiology) • Computer access • Physician order entry • Patient monitoring • Patient surveys and exams 	<ul style="list-style-type: none"> • Dietary Management • Bed Management • Maps and Directions

- Through integration with Hospital Information System

System Architecture

Lincor's MEDIVista is a fully integrated solution using Lincor software platform across the entire system. The architecture diagram of a typical fully digital installation is shown in fig. 1.



Integrated Point-of-Care Information and Entertainment System



MEDIVista™ has 4 main components:

- The Bedside Terminal
- The Network infrastructure
- The Back-office rack system
- The payment system

The Bedside Terminal consists of a 15.4 inch Widescreen or 17 inch LCD PC terminal running the MEDIVista™ terminal software. It also includes the articulated arm and wall box. The cabling for the terminal is delivered through the arm. The terminal is a modular construction to facilitate different peripheral requirements. It does not use a fan and is designed for a hospital environment. Primary interface with the patient is through the touch screen or front panel buttons. The MEDIVista™ software provides a full operating system for the terminal and all its peripherals; it runs application software to interface with clinician services or medication management



Peripheral options include:

- Phone handset--- included/not included,
- Analogue phone
- Smart card reader
- Magnetic stripe reader
- Built in speakers
- Analogue TV tuner
- Wired remote control
- IP65 Keyboard or Bluetooth keyboard
- Bar code reader

Mag Stripe reader



The Network Infrastructure provides the communication path for the delivery of all services from the back-office to each terminal. A properly implemented network is critical to the operation and delivery of services. In a fully IP based solution the network must be capable of delivering up to 6mb to each terminal and must support both multicast and unicast delivery of data. In most cases a separate network is installed for the MEDIVista™ system and is independent of an existing hospital network. This network is usually connected to the main hospital network via a secure router/firewall. The network begins with the core network switch which is a level 3 switch and is IGMP enabled. This is linked through a 1000base-T fibre connection out to the edge switches. Each edge switch is located near a ward and can support up to 48 terminals on a 100base-T CAT5 connection to each terminal. The number of edge switches required is determined by the physical layout of the wards.

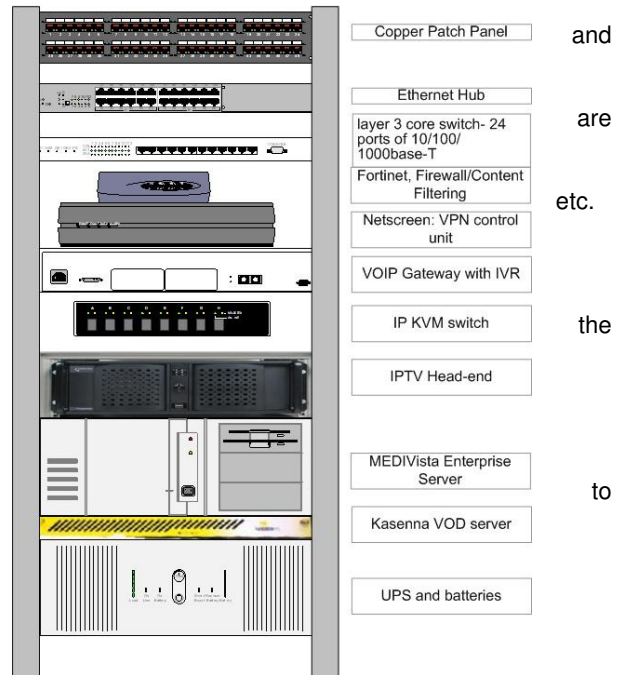
In its standard configuration, MEDIVista™ will deliver digital IPTV to each bedside terminal, however, In the event that a hospital already has coax to the bedside it also can deliver analogue TV via the optional TV tuner in the bedside terminal. If an analogue phone line is available at the bedside this can be incorporated with an optional PSTN module in the terminal, otherwise MEDIVista™ has the capability to deliver SIP based VoIP telephony to each bedside unit.

The Back-office rack system:

The “Back Office” system is the central control management center for the entire MEDIVista™ system. The main functions of the Back Office the reception and delivery of the services to the bedside such as TV, Radio, Internet, Telephony,

The Back Office also incorporates the MEDIVista™ Enterprise server which manages delivery of all the required services over IP. It manages the billing solutions and provides remote management and reporting. The MEDIVista™ software also provides the interface Clinician services, as these vary from hospital to hospital, Lincor will work with its customers to develop the optimum interface to the Clinical Applications.

Back Office
Principle Components



The Payment System

The MEDIVista™ software platform incorporates a flexible billing engine to handle multiple payment options. These include pre- and post-pay and allow for the payment on services on a time basis and usage basis. The billing can also be interfaced to the Hospital Information System for inclusion in the patient total hospital bill.

Lincor provides a smart card based pre-payment solution using vending machines located at convenient points throughout the hospital. These machines also run Lincor software which is networked to the MEDIVista™ enterprise server to facilitate full control over the vending machine and ensure optimum performance and convenience. The vending machine can take in coins and notes and will program the cards as required. It will



Integrated Point-of-Care Information and Entertainment System



allow refunds and top-ups of the cards. A printed receipt is provided to the user for all transactions. The user interface is on the vending machine is similar to the terminal to ensure ease of use. The Prepaid Payment Vending machine is available to support a number of currencies.