MCL-Link Overview

Visualize...

... occasionally connected mobile computers

Realize...MCL-Link

MCL-Link

MCL-Link is essential to the deployment of mobile computers running MCL applications in batch, non-concurrent user environments.

MCL-Link is designed to support reliable, sustained, guaranteed, point-to-point communications involving the sequential management of many mobile computers, one mobile computer at a time.

MCL-Link manages mobile computers over direct connect serial RS232 or USB, modem dial-up, or even point-to-point Ethernet.

As a component of MCL-Collection, MCL-Link brings you the benefits of MCL-Collection's layered architecture allowing you to use multiple MCL-Bridges concurrently. This lets a mobile worker application update, for example, a host application, SAP R/3, Oracle, and an Excel spreadsheet database all at the same time.

MCL-Link provides your point-to-point communications environment, mobile worker applications with the same host access as your networked mobile computers.

Occasionally Connected Applications

Typical occasionally connected, batch mobile worker applications include route accounting, direct store delivery, inventory, retail returns, competitive price surveys, electronic ordering, dashboard sales product lookup, field service, and so on.

Operationally most of these applications require your mobile worker to download a task list or product file at the beginning of a shift, and then upload the day's efforts at the end of the shift. Task downloads and transaction batch uploads can take place locally at your facility, or remotely from, for example, your mobile worker's home.

MCL-Link exchanges MCL applications, data files, images, label formats, and data records between host systems and the mobile computer. MCL-Link ensures the data is successfully and completely transferred.

One of MCL-Link's greatest benefits comes from its ability to intelligently handle record level data exchanges. Consider a retail inventory application. You have a team of inventory mobile workers at different locations counting like items. At the end of the shift, you want all the collected data immediately posted to your Oracle database. With MCL "processes" and MCL-Link's ability to exchange record level information, each mobile worker's inventory is intelligently uploaded item by item, record by record. Each record is posted simultaneously to a couple of database tables: one table to associate the inventory taken by each mobile worker with the given inventory location and the mobile worker's ID; and a second table to reflect a running tally of all inventories from all mobile workers from all locations.

MCL-Link ensures your business data integrity—data where you need it, when you need it, so you can make sound business decisions.

MCL-Link Advanced Features

MCL-Link offers many advanced features designed to maximize your mobile workforce productivity while minimizing your operating costs.

Definitions

Master/Slave: Refers most typically to an architecture in which one device (the master) sequentially controls one or more other devices (the slaves).

Client/Server: Refers most typically to a networked architecture in which clients are served concurrently.

Note: MCL-Link has a master/slave architecture.

Local communications. MCL-Link communicates with local mobile computers over direct connect serial RS232 or USB.

Remote communications. MCL-Link communicates with remote mobile computers over telephone lines and modems.

Minimum traffic. By exchanging only data and applications, MCL-Link minimizes traffic, bandwidth usage, and the connection time between the mobile computer and MCL-Link. This approach gives the best possible device response times. It also minimizes operating costs where bandwidth usage has associated costs.

High data capacity. Data intensive environments use MCL-Link Multi-com which controls up to 8 serial RS232 communications ports on a single server. This means that up to 8 mobile computers can exchange data at the same time. Multiply this by the sequential management of multiple mobile computers on each port, and you quickly realize MCL-Link's capacity to manage all your operational data.

Master mobile computer. MCL-Link supports mobile computers acting as masters. In this case, a mobile computer initiates communications with MCL-Link to establish a communications session with a host to upload its batch data. If remote communications are required, the mobile computer uses a cradle and modem to initiate dial-up communications with MCL-Link and establish a communications session with the host.

Slave local mobile computer. MCL-Link supports mobile computers acting as slaves. In this case, a mobile worker puts and leaves a mobile computer in a cradle connected directly to MCL-Link. On a scheduled basis, MCL-Link initiates contact with the mobile computer, establishes a communications session between the mobile computer and a host, handles the communications session with uploads and downloads between the mobile computer and the host, and terminates the session. MCL-Link then initiates contact with the next mobile computer, and so on, sequentially, until all the mobile computers have been serviced.

Slave remote mobile computer. MCL-Link supports remote mobile computers acting as slaves. In this case, in MCL-Link, you create a list of your workers' cradle modem telephone numbers. At the end of a shift, a mobile worker puts and leaves the mobile computer in a cradle with attached modem. On a scheduled basis, MCL-Link dials a telephone number to initiate contact with a mobile computer. MCL-Link establishes a communications session between the mobile computer and a host, handles the communications session with uploads and downloads between the mobile computer and the host, terminates the session, and then dials the next remote mobile computer in the telephone list. MCL-Link continues dialing each mobile computer sequentially until all the mobile computers have been serviced.

Such communications sessions are typically scheduled to take place during the night. When the mobile worker starts work the next morning, the previous day's data has been uploaded to the host, and that day's task list has been downloaded from the host. The mobile worker gets to work right away and is immediately productive.

Master/slave mobile computer. MCL-Link has a unique feature which allows a mobile computer to alternate between master and slave modes all within one communications session. A mobile computer may initiate a communications session as a master to upload its batch data. It may then switch to slave mode to receive new lookup tables, a new version of its mobile worker application, and so on, from the host.

Remote application/project update. MCL-Link offers local and remote automatic application updating for mobile computers. Individual mobile computers, groups of mobile computers, or all known mobile computers may be identified as target devices to receive a new version of an MCL application. This allows you to maintain accurate application version control across your mobile computer population.

Record level exchanges. One of MCL-Link's greatest benefits comes from its ability to intelligently handle record level data exchanges. The inventory example described earlier demonstrates the flexibility and control MCL-Link brings to your data uploads and downloads.

Minimized cost of operations. MCL-Link's unsurpassed communications flexibility allows you to tailor your communications sessions to suit your operations and minimize communications related operating costs. MCL-Link has an ACK/NAK communications protocol with packet level retries and checksums. Because of its robust communications protocol MCL guarantees data delivery between MCL mobile worker applications and your host system when you use MCL-Link.

Now consider sending inventory data via a non-guaranteed communications vehicle **without** using **MCL-Link**. If even just one worker's data is lost for just one shift, your entire inventory integrity is compromised. Efforts to recover the lost data, if even possible, may result in significant costs. Even worse, inaccurate inventories can lead to loss of potential revenues from lost sales due to unexpected shortages.

MCL-Link's data delivery guarantee prevents this situation from ever occurring in your operations. Your business data integrity is ensured.

MCL-Designer
High-productivity, horizontal development environment to create enterprise-ready, multimodal, data capture applications.

MCL-Link
Batch/ Point-to-Point, Serial:
- Direct Connect RS-232
- Modem

MCL-Net
Real-Time/ Concurrent Users:
Wireless
- WLAN: WiFi, 802.11
- WWAN: GSM, GPRS, Wired Ethernet

MCL-Bridges
- Host Applications
- Back Office Applications
- ERP: SAP
- Warehouse Management (WMS)
- ODBC: Oracle, Access, FoxPro, DB2, Excel, Sybase, SQL

MCL-Collection with Vocollect Voice™
Voice Recognition, Voice Synthesis

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About MCL Technologies

MCL Technologies is a recognized leader in delivering high-productivity software development tools for mobile workforce application development, deployment, and management. Its enterprise-ready, standards-based software suite, MCL-Collection, seamlessly integrates the latest technologies with mobile computer, multi-manufacturer, cross-platform compatibility. Through the integration of mobile computing, wireless infrastructures, and data capture technologies like barcode scanners, radio frequency identification, and voice recognition, MCL-Collection helps organizations deploy mission critical and on-demand multimodal applications to improve workforce productivity, reduce costs, and achieve competitive advantage. Since 1992, MCL-Collection has been implemented in thousands of locations around the world by large and small organizations with sectors of activities as varied as retail, banking, healthcare, government, transportation and logistics, warehousing, field service, and manufacturing. More information is available at http://www.mcl-collection.com.

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