



DELIVERING STRATEGIC SOLUTIONS ACCA'S 2000 ANNUAL MEETING

Background

The Lucent Technologies' RE-USE^[1] business began in 1991 at the Merrimack Valley Works. Its original charter was to provide an economical alternative to manufacturing for providing customer support (growth and repair) options on vintage products. By design, products became candidates for re-use when the following conditions were met:

- (1) Removal Rate >>> (Growth Rate + Repair Rate)
- (2) Components were no longer available to support manufacturing
- (3) Technology was Obsolete

Titled RE-USE, the business actually is much more comprehensive than its name would imply. It could more appropriately have been named "Remanufacturing", for that is what it entails. While new to the telecommunications industry, remanufacturing has a strong tradition in other industry sectors. In fact, automotive remanufacturing represents nearly two thirds of all remanufacturing activities worldwide, accounting for nearly a \$60 billion revenue stream. Nearly every auto part that provides function, performance, safety or comfort has a remanufactured counterpart.

From its genesis in the automotive industry remanufacturing has expanded into armament support equipment, electrical apparatus, electronic components, copying machines, vending machines, office furniture, farming equipment, aircraft parts, cameras, and over 40 other major product areas. And, in 1991 Lucent added telecommunications equipment to the list. A research study conducted in 1996 by Professor Robert T. Lund of Boston University established the size of the domestic remanufacturing industry as follows:

- Total Number of Firms 73,000
- Total Annual Industry Sales \$54 billion
- Total Direct Employment 480,000
- Average Annual Company Sales \$2.9 million
- Average Company employment 24
- Number of Product Areas Over 46 major Categories

Aside from the obvious economic benefit associated with the industry, remanufacturing also conserves the value of the labor, materials, energy and capital equipment that went into making the product initially. In contrast to recycling, which only recovers the material constituents of products, remanufacturing recaptures large fractions of all of the resources that go into their manufacture. As much as 85% of the energy used in manufacturing automotive products is preserved in the remanufactured product. Adding the environmental benefits of remanufacturing to the economic benefits results in a combination that has strong appeal to industry, government agencies and the private sector.

The RE-USE Model

Although the process sequences required to remanufacture may vary significantly from industry to industry, the basic process follows these six key steps:

- 1) Disassembly of used product core
- 2) Cleaning, inspection and sorting of parts
- 3) Testing components
- 4) Reworking/repairing of parts and/or replenishment with new parts
- 5) Re-engineering and re-assembly of product

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- 6) Final testing of product

During each step, and prior to shipment to a customer, adequate quality control and assurance measures are applied. Through this process, remanufactured products reach their customers with the same quality level, performance and endurance as their new counterparts.

In Lucent Technologies, the remanufacturing processes are conducted in our Global Provisioning Centers (GPC's). In most instances, the products are remanufactured in the same production shops in which they were originally manufactured. This provides the highest level of skilled workmanship, the most current design specifications, state of the art engineering support and comprehensive quality evaluation to the finished product. The end result can be described in the Lucent definition of RE-USE:

"Tested, quality approved used equipment that has been re-manufactured to current design specifications in Lucent factories for the purpose of resale to telecommunications service providers. Equipment includes circuit packs, shelves, bays and systems."

Finally, although they provide significant benefit to industry and society, the following activities do not meet the definition of remanufacturing. Therefore, they will not be considered to be part of the remanufacturing industry.

- Recycling
- Repairing
- Restoring
- Reconditioning
- Refurbishing
- Reselling
- Re-using

The Industry, in General

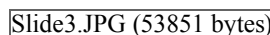
The annual market for used telecommunications equipment has been estimated by analysts to be in the \$1.4 to 1.6 billion range, with a growth rate of 5-10% per year. Approximately 80% of these sales are associated with Lucent Technologies products, with a profile of 75% circuit packs and 25% equipment.

The industry is dotted with thousands of vendors with annual sales of less than \$100,000. Only a handful (less than 20) of vendors have annual sales in excess of \$10,000,000. Lucent's 1998 sales approached \$250,000,000 with equipment sales accounting for about 60% of the total. Engineered, wired equipment offerings are the differentiator between Lucent Technologies and the rest of the secondary market vendors (SMV's). Some SMV's offer value added services like repair or system integration, but none can economically and effectively provide fully engineered conversions of vintage designs to current designs. This is the value proposition of the Lucent RE-USE business.

Why RE-USE? - the National Market

The Lucent Technologies RE-USE solution is a response to customer driven demand for timely, cost effective telecommunications offerings. While our used products are not intended to compete with new equipment sales, if we are not sensitive to our customers' needs we stand to lose both sales (new and used) to SMV's. To this point, the one need only peruse a trade magazine, such as Telephone International, Inc. to understand the revenue risk that Lucent faces by turning away RE-USE opportunities: In a recent issue, Lucent products were featured in the advertisements of a number of secondary market vendors.

The myth is that the secondary market is not a strong domestic market. The fact is that hundreds of vendors will provide \$1.2 billion worth of used equipment to the service provider market annually. Another myth is that the secondary market does not support service providers with Lucent products. The fact is that Lucent products are heavily trafficked in the secondary market. Flagship products are bought and sold along with older technologies.

 What motivates service providers to buy used equipment? In this unprecedented market for personal communications services, mobile communications and Internet offerings, used equipment turns out to be an enabler on many fronts. As major providers position themselves to grow market share through mergers, acquisitions and consolidations, they inject equipment into the aftermarket. It is this equipment that fuels the RE-USE engines that drive growth in other market sectors. This growth is most often associated with the following business needs:

- Market penetration - rapid deployment for new service

- Pre-existing use - replacement for in-service failures
- Mature technology — "topping off" the embedded base
- Significant price break from new - must be less than 50% of new price
- Warranty - minimum of 1 year
- Service - need delivery within 2 days of order
- Quality of Service - quick response, variety from which to select

To the extent that suppliers can deliver high quality, timely, cost effective products to support these needs, they will thrive in the market. As the OEM, Lucent enjoys the advantage in the configured equipment market. This is not the case in the circuit pack business where no re-engineering or remanufacturing is required.

In many ways circuit packs are treated like commodity items in the aftermarket. Thus, Lucent struggles to displace SMV's that have established historical relationships with our traditional customers. Our only advantage in this market lies in our ability to provide factory tested products to our customers. As long as our used equipment continues to bypass our acquisition efforts and get released into the aftermarket, we expect to encounter stiff competition for circuit pack sales from a large number of SMV's.

The Lucent RE-USE Process - Our Differentiator

All Lucent RE-USE products are remanufactured in a factory environment according to documented quality processes that adhere to ISO standards. Safeguards are built into the processes to ensure that the legal requirements of ownership and title are embodied in the products that are sold. Used products must be clearly re-identified such that they can never be "misrepresented" as or "confused" with new products. To this end, Special Customer Operations RE-USE has developed and documented specific processes to ensure adherence to the legal and quality guidelines that define our business.

Upon acquisition and receipt at one of our GPC's, RE-USE products are inventoried into raw material (RM) using the following process:

- Zero out the WES (Warranty Eligibility System) label to terminate any outstanding warranty on the product.
- Visually inspect for obvious signs of damage, charring or unauthorized markings. (Such products are discarded as JUNK).
- Engrave "RU" on the circuit board near the faceplate, or, on the shelf bracket to ensure such product can always be identified as used.
- Receive into inventory under a unique raw material comcode (200xxxxxx).
- Establish a corresponding orderable "Finished Goods" (FG) RE-USE comcode, which is costed and priced in corporate data bases (ACA, PSDB, PASS, LCMS).

Upon receipt of a customer order, the RM is processed into Finished Goods (FG), by way of the following process:

- Circuit packs previously engraved are labeled with a pink RE-USE sticker applied to the faceplate. Bays and shelves are similarly labeled.
- Outstanding CN's and product upgrades are applied, as necessary.
- Equipment is configured per engineered spec and tested to the latest generic software release in Lucent source factories.
- Circuit packs are individually tested to the current factory test specification.
- The product is inspected by the resident quality organization per quality handbook #10. All "FG" rated material must meet its current electrical test specifications. Visual and mechanical inspection standards are relaxed to allow the presence of minor scratches, blemishes and signs of normal wear and tear.
- Prior to shipping, the warranty is reset in the corporate WES system, per the customer contract, and is effective the day of shipment.
- Product is packaged and shipped to meet the customer requested ship date (CRSD).

The combination of re-engineered design capability and automatic upgrades to current design specifications are the business features that legitimize Lucent's RE-USE offerings to the service providers. Few, if any, SMV's or value added resellers (VAR's) can build this value into their used equipment offerings. These differentiators should be reinforced with our customers whenever Lucent RE-USE equipment is being offered as a solution to their needs.

Why RE-USE? - the Lucent Market

Since its inception in 1991, the Lucent RE-USE business has enjoyed impressive growth in product scope and financial results. The original business was focused on factory work assists for legacy Digital Radio and FT Series G product lines. Product offerings have since broadened to include virtually all technologies currently offered within the Systems for Network Operators product unit, with the exception of the newest product offerings. While we do not proactively pursue competitors products for the purpose of resale, do acquire such products in support of customer team trade-ins or buybacks that facilitate displacement sales for Lucent equipment.

The sales history for RE-USE products has evolved in manner similar to the portfolio development. The year-over-year growth rate has been accompanied by strong gross margins which have always exceeded 50%.

Re-USE sales are all transacted through the same merchandise sales classes as are used for the original product sales. As such, the value proposition of RE-USE is reflected as Proforma or Business Results in corporate CFO reporting. In this context, RE-USE enables sales for the owning product units rather than competing for sales with those units. This strategy allows our business managers to maintain focus on incremental sales for Lucent.

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Whether sold as a standalone product or incorporated in a hybrid new/used offering, RE-USE sales are made to many of the same customers to which our company sells new equipment. Our list of international customers has expanded since 1997, and now includes about 24 repeat customers from EMEA, C&LA and A/P regions.

Slide1.JPG (73474 bytes) Many RE-USE items are ordered in the same manner as their new equipment counterparts by regional ordering centers through corporate Order Management Systems.

In cases where re-engineering is required for equipment reconfigurations or hybrid new/used applications, Technical Consultants and Line Engineers work closely with RE-USE planners to identify used material that can be incorporated into the customer's order. When the order specification has been developed, J-drawing and list items are translated to the equivalent RE-USE orderable item in H-drawing format. The order is then transmitted to the RE-USE source GPC for fulfillment.

MODS orders follow a simpler path to fulfillment, since those items contain the same description and CLEI codes as their new counterparts. The unique RE-USE comcodes are ordered through Regional Customer Service organizations and sourced on MV/V1. All orders bill through SMART, and S/COS flows through corporate billing systems to the owning product unit's P&L and enabling customer team's sales accounts. Product warranties are automatically applied when the order is provisioned from the GPC's. The RE-USE default of 6 months is applied to all shipments, unless overridden by Product Management or contractual obligations. Used equipment that is integrated into new equipment orders carries the new equipment warranty.

Credit for all RE-USE sales is driven to the Lucent sales teams who service the RE-USE accounts. CFO has developed an accounting practice that enables full sales credit to the owning sales team when RE-USE is engaged via trade-in or buyback to secure the equipment that is being displaced. That process applies whether Lucent or other OEM equipment is displaced by the new Lucent sale. This is a powerful tool to help sustain the flow of used equipment into our RE-USE business, while assisting the sale of new Lucent equipment to our service provider customer base. When done well, it turns out to be a WIN, WIN, WIN situation!

Although SCO RE-USE maintains an inventory of over 500,000 pieces of equipment that spans over a dozen product lines, one must remember that most RE-USE items are rated LA (limited availability) and may not be available on demand. SCO has a reservation policy for all material that is Firm Price Quoted, and its acquisition team is constantly pursuing stock replenishment opportunities around the globe. With sound planning and reasonable lead-time, most orders for used equipment can be satisfied by SCO.

Positioning RE-USE to Take Share

The RE-USE value proposition is comprised of the following major elements:

- Meeting customer demand for used equipment content in their networks
- Strengthening price offerings by integrating used with new, offsetting sale price with trade-in/buyback credit, or substituting Lucent used equipment sales for competitor's new equipment offers.
- Meeting delivery intervals for short interval or unforecasted demand.
- Leveraging Lucent's strategic assets of R&D, quality, brand name and reputation to displace SMV's and generate incremental revenue.

The RE-USE value proposition should be applied to accomplish any of the following business objectives:

1. Displacing competitor's equipment from customer's embedded base.
2. Reducing the price of new sales in non-competitive markets.
3. Meeting short delivery intervals.
4. Supporting demand for DA (discontinued availability) product.
5. Displacing SMV's from the bidding process.
6. Assisting customers in integrating their surpluses as part of our sales orders.
7. Satisfying customer demand for used equipment content in their networks.

The 4ESS buyback project in 1997 is the best example of how all of these elements came together for the three companies that were involved in the process, Bell Atlantic, Lucent and AT&T. The SCO RE-USE group supported a \$325 million 5ESS sale to Bell Atlantic by offsetting the purchase price with a \$15 million buyback of the six 4ESS machines that were being displaced. In parallel, the ACBU Customer Team bundled the displaced 4ESS machines into a new sale to AT&T to support their network growth needs. SCO RE-USE managed the project, from central office removal of the used 4ESS cores through re-engineering and remanufacturing of the six machines that AT&T ordered, to installation in AT&T central offices. This project resulted in revenue generation for Lucent of \$325 million for the new 5ESS equipment and \$160 million for the remanufactured 4ESS equipment. Follow-on sales to AT&T for additional growth and maintenance equipment to support the 6 cores has amounted to approximately \$100 million over the past 18 months. In many ways, this example is the model against which all RE-USE opportunities should be gauged.

Epilogue

Market analysts have reported that a lucrative business for used telecommunications equipment exists on a global level. By far, the majority of central office products that are bought and sold on the secondary market were originally manufactured by Lucent Technologies. Most major domestic service providers buy from and sell to the secondary market on a routine basis. And, many of them have formalized their reuse programs by establishing corporate goals for internal reapplication of their surpluses or adding used equipment content to their purchases.

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Given the volume of product that is being moved through the secondary market on an annual basis, it should be clear to Lucent colleagues that new equipment sales are being comprised as a result. And, it is not just mature or vintage products that are affected. We have uncovered much evidence that shows that flagship products come available on the secondary market soon after they are released for sale to the general public. Given our company's slow start on DFE and "takeback" initiatives, and the absence of an effective policy on fullstream product lifecycle management, it is easy to understand how the aftermarket began and has flourished. Our choices, moving forward, are 1) to maintain status quo or 2) to take charge and take share by engaging all of Lucent's business resources to recapture our product sales that have been lost to SMV's. The current business situation places Lucent on par with the SMV's for acquisition of customer surpluses and support of customer reuse demand.

In this model Lucent faces the customers for management of their used Lucent product needs. And, RE-USE uses the SMV's to redistribute the customer's non-Lucent surpluses to the marketplace. This model maximizes our share of the revenue that is generated from resale of our equipment, along with impacting new product sales for our competitors. To be effective, this model needs support from all organizations involved in the provisioning chain, from Account Executives (AE's) and Customer Teams (CT's) to Product Managers and Marketers (PM&M) to GPC Operations to IS&S and back again to AE's and CT's. It is truly a full circle process, with SCO RE-USE at the center managing the cycles.

In conclusion, I would like to leave you with the following thoughts:

- Every sale of Lucent equipment by secondary market vendors is a potential compromise to a Lucent sale.
- Each sales dollar that goes to a secondary market vendor could potentially go to Lucent Technologies.
- Used equipment sales DO compromise business strategies and sales for Lucent Flagship products.

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[1] When displayed in print, hyphenated and capitalized, "RE-USE" refers to the name of the Lucent Technologies, Inc. product offering that is part of the Special Customer Operations business unit.

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