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Daniele Fracasso  
Telecom Italia

## Master Data Drives Efficiency Across Every Telco Unit

### *Addressing Dirty Data Boosts Bottom Line*

#### THE CHALLENGE

► Telecom Italia is Italy’s largest communications company, offering fixed line services in Italy, along with mobile and broadband in Italy and eight other countries. As the company grew and evolved, it needed to make sure that its operations developed to optimize its investments and manage costs effectively. With a growing number of service offers delivered over an increasing variety of network equipment from a broad number of equipment vendors, the difficulty of managing the business to support the growth efficiently was a top of mind issue for Telecom Italia’s executive team. As with many carriers facing unprecedented growth and change during the early 1990s, Telecom Italia found that there was definite room for improving operational efficiencies to reduce errors and drive out excess costs across the enterprise, from engineering and planning to procurement, maintenance, inventory, and billing. After a complete evaluation of available solutions, Telecom Italia determined that Telcordia could play a major role in addressing this systemic challenge by transforming the way the company captured, managed, and analyzed its vast amount of equipment infrastructure data.

#### THE RESPONSE

► Together, Telecom Italia and Telcordia embarked on a two-pronged plan that included the use of the Telcordia® Common Language® Equipment Information Service, the industry’s first and only managed information solution that provides a Global Access Registry (GAR) that hosts equipment information from thousands of equipment brands and provides a meaningful and globally unique identifier (across equipment manufacturers) and a comprehensive list of equipment attributes. This approach to managing equipment information via a Master Data Management strategy accelerates the overall process of equipment selection, procurement, and deployment.

## Trying to “Speak” More Than 30 Languages

When Telecom Italia first engaged Telcordia, it had more than 30 equipment suppliers who were all using different identifiers and data formats to name and describe their network products. In fact, some suppliers were using multiple formats, naming models, and data structures within their own companies to name and describe the very same products. This created numerous challenges with regard to processing and interpreting equipment information, and resulted in poor automation levels.

Telecom Italia first implemented Common Language Equipment Information (CLEI™) codes in conjunction with its deployment of a major inventory record keeping and provisioning system for interoffice trunk facilities. The adoption of Common Language services was the most pressing goal, given the time, money, and confusion created by miscommunication with the supply chain. By adopting the use of Common Language services, Telecom Italia was able to quickly implement a single approach to naming and describing all equipment to be placed in their network that would be used to communicate across all Telecom Italia organizations, systems, and even with their trading partners. The result was faster time to deploy new technology, reduced cost to build equipment models across Telecom Italia systems, and the ability to better manage inventory levels through knowledge of “interchangeable devices”.

This was increasingly critical to support Telecom Italia’s growth and address the inconsistencies that showed up in:

- **Manufacturer Product Codes or Part IDs:** The varied schema to create part numbers and the different rules to indicate number or version changes left Telecom Italia with multiple internal codes for the same part, and made it difficult to understand which parts were interchangeable.
- **Part Attributes:** Manufacturers’ part codes did not relate to part features, which forced Telecom Italia to navigate lengthy, technical documentation from suppliers to extract the needed information. Additionally, different identifiers and attributes meant that Telecom Italia systems and human resources needed to deal with a huge set of variable information, resulting in errors and an inability to automate many processes.
- **Part Labels:** The lack of industry-standard labels made it difficult to read part numbers and nearly impossible to link equipment labels to data in Telecom Italia systems.

## Accelerating the Coding Process

In addition to resolving incompatibilities with suppliers, Telecom Italia was growing quickly and equipment was changing constantly to keep up with new technologies and services.

“We value our relationship with Telcordia,” says Daniele Fracasso, Common Language Director for Telecom Italia. “Telcordia has had a presence here since our first Common Language services implementation, and they have been by our side every step of the way, working directly with our equipment providers to ensure that we have the information we need, when we need it.”

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Thus, when Telecom Italia decided that it needed to accelerate the adaptation of new equipment in order to support its growth, position itself for the rapid introduction of new technology, and manage equipment characterization costs, it turned to Telcordia to help put its plans into action and to streamline the overall process of equipment identification and definition in a way that would enable its systems and processes.

Because Common Language Information Services is a commercial offer with nearly a hundred customers and 450,000 equipment items in its registry, Telcordia was already working directly with global equipment providers to ensure that their equipment was coded before they brought new products to market. Working with Telcordia, Telecom Italia then compelled its local suppliers to adopt Common Language services and their extended attributes as part of their standard manufacturing process.

Together, Telcordia and Telecom Italia met with the local equipment vendors and explained why it was far too burdensome for Telecom Italia personnel to extract the necessary information from thousands of pages of technical documentation. They also explained that adhering to a uniform data structure and format could deliver huge benefits by securing Telecom Italia as a customer and helping the equipment manufacturers to attract other Communications Service Providers (CSPs) around the world, who were increasingly adopting Common Language Information Services.

“In the beginning there was a lot of pushback from the suppliers,” explains Fracasso, “but Telcordia was with me the entire time, explaining the process and helping our suppliers truly understand the value not only to our business but to theirs. For all of us, there are too many costs and inefficiencies to wait for the impending standards to be adopted. Besides, standards are standards — they provide a foundation for information solutions, they do not provide the actual platform or management services for information management. While Telecom Italia is very active in standards bodies, we leverage the Common Language team and the influence it has due to its large customer base, and we look to Telcordia to leverage the best of standards into an implementation on our behalf. Without Telcordia it would fall upon Telecom Italia and our long list of equipment vendors to implement in a consistent manner, something we knew would never work out.”

Today when a new piece of equipment is delivered to Telecom Italia, it is delivered with a Common Language identifier placed on the device by the equipment vendor. The label of the device faceplate includes a human readable identifier and a barcode. The same identifier is typically burned into the Management Information Block (MIB) of the device, meaning it can be auto-discovered. It now takes a fraction of the time to get new equipment data models created in Telecom Italia’s systems since they inherit them from the Common Language Equipment Registry, thereby improving the efficiency of equipment deployment and enhancing the relationship between Telecom Italia and its equipment providers.

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## Transforming operations

“For Telecom Italia, the value of Common Language Equipment Information Service is that it eliminates our need to manage dissimilar information from the many equipment manufacturers that we buy from. Furthermore, Common Language Equipment Information Service provides significant intelligence and information behind its identifiers. The uniform, strict application of this approach across virtually every major equipment vendor in the marketplace greatly simplifies our overall operations and takes a great burden off our back,” Fracasso explains. “No one in the industry has reproduced the kind of managed information solution provided by Telcordia. They have successfully worked with manufacturers and CSPs to define and then implement a shared scheme for instantly communicating the type, version, attributes, manufacturer, and interchangeability of any piece of equipment. We now receive meaningful and consistent attribute data in an automated and reliable way no matter who the equipment vendor is. It’s all the information we need to manage our business.”

By making the decision to work only with suppliers that adopt the Common Language convention, Telecom Italia literally reinvented its day-to-day operations and removed a significant hurdle to the deployment of new network equipment.

“We have found that virtually all equipment vendors we deal with are prepared to support us by adopting Common Language information services. What’s more, even our systems providers are moving to adopt Common Language information services,” Fracasso adds.

For example, Telecom Italia’s Enterprise Resource Planning (ERP) system vendor has adopted Common Language information services to support asset and materials management, and they are now evaluating Master Data Management platforms to manage the distribution of this critical data across Telecom Italia’s entire enterprise. Many of the world’s largest network equipment vendors have begun to burn CLEI codes into the MIBs of their network products. One has even moved to provide auto-discovery of the Common Language identifier via its network management system.

These are just two examples of how Telecom Italia’s vendors are collaborating to complete the Telecom Italia equipment information ecosystem. Now, anyone at Telecom Italia can refer to a device by one name that is meaningful to all of their employees and equipment vendors. Moving forward, when a card is plugged into a shelf, an element manager will be able to read the CLEI code from the equipment MIB and populate the OSS and ERP applications automatically, without human intervention. Most importantly, every day Telecom Italia realizes the capital and operations advantages of implementing Common Language information services.

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## THE RESULTS

► Empowering Telecom Italia with continuous support to expedite the creation of equipment codes and attributes and winning supplier buy-in is delivering significant bottom-line benefits. By implementing Common Language Equipment Information Services for all equipment purchased by Telecom Italia, the immediate results included:

- 40% reduction in expenses for broadband provisioning and accelerated provisioning time by improving network ordering, receiving, and placement of network equipment
- 10% reduction in warehouse handling costs and reduced spare inventory due to better tracking and interchangeability data
- 90% reduction in duplicated entries in its ERP system
- 90% reduction in manual key entry errors.

“My intent is to drive the use of Common Language codes to every department in Telecom Italia,” says Fracasso. “When Purchasing talks to a supplier, they will communicate with one language and know for certain that the product that arrives is exactly what we tested. If Maintenance needs to return a product for repair, they will know exactly who made it and where to send it. For billing, our Controller will be able to verify any invoice against an item’s CLEI code. For reporting, all data can be collected and rolled up under the Common Language codes and costs can be allocated using Common Language attributes.”

“Along the way, Telcordia Common Language experts continue to stand by me,” Fracasso says. “They are helping us evolve our understanding of how new technology can be supported by this information service. They represent us in major standards bodies and drive the evolution of industry standards and their service in a consistent manner — and they help us learn from the best practices of other major telcos around the world, so we can evolve Telecom Italia processes in ways that involve our vendors and other trading partners and drive profit and growth for Telecom Italia.”

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MC-COR-CS-007