

3M

How to keep track – from Post-it® Notes to Thinsulate®

Solution Overview

Industry

Manufacturing

Application

Label Printing from Host

Teklynx Software Products

Label Design Software
CODESOFT

ERP/Host Connectivity Software
SENTINEL Print Pack

Decentralized Printing from Centralized Data at 3M

With branches all over the world; a multitude of different hardware and software environments; printers with different capabilities from different manufacturers and a range of products that goes far beyond the familiar Post-it self-stick notes – is it really possible to standardize on a single, consistent labelling solution? The answer is yes. Data stored at a central location can be used for decentralized label printing regardless of the printer model or location thanks to CODESOFT™ label design software and SENTINEL™ Print Pack S/2 host connectivity software from Teklynx International.

When it comes to solving almost any identification task, you can be sure to encounter a variety of different, often contradictory factors. For example, most large companies have a number of different printers, usually acquired over a long period of time. Other factors may relate to product characteristics or arise from the requirements imposed by distributors and customers. Regardless of just how heterogeneous the circumstances, it is clear that data must be consistently presented and identifiable through uniform label design.

3M – a well-known brand in a multitude of markets

Minnesota Mining & Manufacturing, better known as 3M, was established in 1902. Today, the company is active in over 60 countries including the headquarters and administrative centre of 3M Deutschland GmbH located in Neuss. Additional plants and offices in Germany are situated in Borken, Hilden, Jüchen and Kamen. Overall, 3M Deutschland GmbH employs a workforce of almost 3,800 in Germany.

The Global Packaging Engineering Systems division of 3M recognized this challenge when it determined the need to introduce a worldwide identification solution that would allow access to data stored and maintained in a central database.

With over 50,000 products based on 30 technology platforms, 3M generated worldwide sales in 1999 of just under \$16 billion. Their products range from part of the kit carried by Neil Armstrong during his moonwalk to special material in Ford, VW or Opel automobiles with catalytic converters which purify the exhaust to fasteners on their patented nappies which help keep babies safe and secure to Post-it notes and Scotch™ brand adhesive tape. Other familiar products include Scotchlite™ reflective foils that ensure that traffic signs and number plates are visible at night, Scotch-Brite™ household products as well as Thinsulate heat insulating materials. 3M products are also used in the fight against disease and to help protect the environment.

Product Comparisons and Site Tests:

The sheer size and variety of products dictated the need for a product identification solution with all data stored in a central packaging database. The uniform product labelling solution had to fulfill several requirements including:

- Usable worldwide at all 3M locations,
- Reliable support available from suppliers in Europe, Asia and the USA,
- Suitable for a maximum number of printer systems from different manufacturers,
- Continuous ongoing product development,
- Extremely high stability and availability,
- Short response times,
- Separation of data, graphics and layouts,
- Referential integrity, i.e. central storage and maintenance of data for use with all labelling processes,
- Availability of a wide variety of integration interfaces, and
- A high level of user-friendliness, for example, using WYSIWYG (what you see is what you get) user interfaces and graphic tools, which render further programming unnecessary when designing or changing label templates.

Following in-depth product comparisons at 3M, two coordinated solutions from Teklynx International were shortlisted: CODESOFT label design software and SENTINEL Print Pack S/2, host connectivity software. Commencing in 1997, a series of international test installations were begun with the aim of familiarizing operators with the program functions, sequences and testing reliability in a production environment. In 1999, the tests were completed, with Teklynx products

demonstrating their stability and reliability. 3M determined that CODESOFT label design software and SENTINEL Print Pack S/2 host connectivity software best met their requirements and as a result, they have been in regular use in day-to-day operations ever since.

Uniform label design with CODESOFT

With the network-compatible label design software CODESOFT, data can be directly imported from all commonly used database systems. The program is certified for Novell, Windows NT®, Windows 95® and also runs in conjunction with AS/400 and UNIX computers. Thanks to ODBC (Open Data Base Connectivity), it is easy to import data from any standard database. Also, graphic formats such as PCX, BMP, TIFF, GIF, IMG or JPEG can be accommodated in the label design. CODESOFT supports the integration of more than 30 uni-dimensional as well as numerous two-dimensional barcodes in the desired label. This makes CODESOFT Enterprise suitable for virtually all industrial applications, including those that feature specific barcode typologies and identification requirements. If online information is to be incorporated into the label using the integrated COMet module, data can be accepted directly from devices such as weighing scales, barcode scanners, optical character readers or volume measuring systems. In addition, current time and date information as well as numeric and alphanumeric serial numbering can be incorporated.

CODESOFT runs on over 800 different barcode thermal and thermal transfer printing systems as well as all Windows® printers.

The program is especially well suited to the needs of large, international companies such as 3M. With a repertoire of 22 foreign languages, it is capable of independently recognizing the user's preferred language as part of the installation process. The program then automatically selects the correct user interface. CODESOFT's HTML generator allows label templates to be distributed via the user company's Intranet as well as over the Internet. This offers the major benefit of standardizing and simplifying label creation for network partners both internally and worldwide.

CODESOFT makes it possible to equip all of the printers, nearly 70, at 3M's locations in Germany with label layout programs. All of the printers can be accommodated, eliminating the need to purchase new equipment. In order to generate labels containing data from high-level computer and software systems,

3M is also using SENTINEL Print Pack S/2 host connectivity software.

Linking the Host to the Label Design with SENTINEL Print Pack S/2

SENTINEL Print Pack S/2 links the label design function with a variety of computer and software platforms

SENTINEL Print Pack is a high-performance connectivity program that runs on an NT workstation. 3M first uses the label design program CODESOFT to define the appearance of the label and the content to be captured from the central database. The central server generates an unformatted print order and sends it to a “virtual” printer on the network. SENTINEL Print Pack enters the required information. Data is then transmitted either in the form of a data file or as a Windows print job. Three data formats can be accepted from the host:

- Formatted ASCII data records with direct or header assignment (ASCII-Sentinel),
- Raw data in any form, with data recognition via an identification character (Raw Data- Sentinel),
- Database captures via ODBC (Open Data Base Connectivity), allowing recognition and analysis of a variety of data types (ODBC- Sentinel).

Regularly recurring logos and graphics are stored at the NT workstation. These are then inserted into the label as required together with the job-specific data and routed to the thermal printer selected for the print order. The finished label is then applied to the goods to be identified, allowing the products to be tracked during the logistical handling process. For example, each time the barcode is read, the object can be unambiguously correlated with the corresponding master data.

3M protects its investment with a future-proof labelling solution

Using CODESOFT and SENTINEL Print Pack S/2 has enabled 3M to standardize and significantly enhance the efficiency of its entire labelling process. The continuous refinement of both the label design and connectivity software means that as new identification solutions are developed in the future, these can be easily integrated into the company's organization. For example, CODESOFT 6 now provides a solution, which not only includes a wide variety of label design features and graduated access rights when modifying labels, but also integrates a programming module for smart labels and transponders. A version of the program is also available for use with SAP R/3 systems. SENTINEL Print Pack also offers

the facility of capturing data from Oracle databases.

For More Information

For more information about Teklynx products or services, please visit our web site or call us at (414) 577-3900 in the US or Canada. Outside the 50 United States and Canada, please contact Teklynx at +33 562-601-080. To access information via the World Wide Web, go to:

<http://www.teklynx.eu.com>
<http://www.teklynx.com/>

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