TELECOMMUNICATIONS

Philips

When the liberalization of the Bundespost's
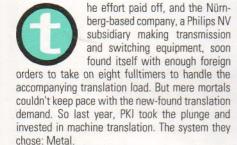### Kommunikations Industries
sourcing regulations forced West German

By Ralf Kohlrausch

Philips Kommunikations Industrie AG (PKI)

to get serious about exports, the company

wasn't slow to take its message worldwide.

he effort paid off, and the Nürnberg-based company, a Philips NV subsidiary making transmission and switching equipment, soon found itself with enough foreign orders to take on eight fulltimers to handle the accompanying translation load. But mere mortals couldn't keep pace with the new-found translation demand. So last year, PKI took the plunge and invested in machine translation. The system they chose: Metal.

"Why Metal, and not Logos or Systran?" asked LT's Ralf Kohlrausch. For that matter, why not wait for Philips NV's own Rosetta, due to be commercially released by 1991?

Imagine an intelligent mini-based hardware-software system that can receive a German-language paper manual in its scanner, have the computer rattle its bits, and output a perfectly translated and digitized English-language manual on a laserprinter? Sounds too good to be true. "But," says Patrick Little of Philips Kommunikations Industrie (PKI) in Nürnberg, West Germany, "it almost works that well." PKI of is one of a small and select band of commercial Metal users - and a very recent convert to high volume translation.

"Until eighteen months ago, our main customer was the German Post Office. Not much demand for translation there – everything being done in German. And whatever did have to be transferred into other languages was usually given to commercial translation companies."

But as one big order – the digitization of the German phone network – was approaching completion, PKI needed no reminders that the liberalization of the Bundespost's equipment sourcing regulations would mean that tenders for further contracts would be invited from all over the EC. The days of the Bundespost's cozy arrangement with its exclusively German suppliers were numbered.

PKI braced itself to hunt for orders worldwide. And with success – especially in the developing world. Large contracts were acquired in India and the People's Republic of China. But rising exports meant a corresponding increase in the company's requirement to translate manuals, contracts and technology transfer documents.

"It was a large order from India – which gave us nine months to translate 6,000 pages into English – which directly induced us to look into machine translation. Our eight inhouse translators just

couldn't make the deadline." So the PKI team started to look into the possibilities. When they checked the available computer systems, they found Siemens Metal the best of the bunch.

"Logos, for example, will only let you lease their system for three years. You can't really invest in Logos and further develop the glossaries and source code yourself, since the whole thing never becomes your own property. And Systran is purely online – which gives you no control whatsoever. As for Philips' Rosetta, being developed in Eindhoven, it won't be on the market till 1991. And Little and his team needed machine translation now.

THE METAL PEOPLE
What Metal offers is an integrated documenting and machine translation system – which you can buy for US$140,000, plus an extra $55,000 for the software. So in September 1988, PKI decided to try it out for a year. They bought the hardware, an MX-2 minicomputer with four terminals and a Symbolics LISP machine, while the software (German-to-English) was provided free of charge for the period of testing. User training was taken care of by Siemens.

PKI's newly formed translation department, with a current fulltime staff of eight, received an initial one-week crash course in Metal, then worked with the system for six weeks. This was followed by another week of training." And when problems do arise, there is a constant hotline to Metal's developers in Munich. Tips and improvements are passed along this line in both directions.

"We've made several suggestions for improvements to Siemens," says Little, "which we are assured will be incorporated into Metal's next version – which is supposed to be available in June this year." When a new PKI product is to be exported, the entire technical documentation, contracts, etc., are handed to the people whom the office wags like to call the "Metal people" – most of them being women – who then take page after page and feed them into a scanner. Metal then splits each document into a text file (ASCII) and a layout file. And while the latter is stored separately, the ASCII text is transferred to the Symbolics, where Metal checks

"There's some people in Nürnberg being buried by a translation load, Man of Metal !!"

the text for unknown words.

Patrick Little and his colleagues then rack their brains, or flick through vast quantities of dictionaries, for translations of unknown words, and key them in. The next step is Metal's automatic sen-

tence-by-sentence translation, which after proofreading and eventual corrections, is reunited with the original layout file.

Result: a perfect, ready-to-use document: same text, same layout as the original – just another language – all output by a (preferably laser) printer.

INTELLIGENT?
Theoretically, Metal could handle 200 A4 pages per day. But human word input and proofreading still slow things down.

"Metal is supplied with roughly 90,000 entries in its electronic dictionaries – which is a good start," says Little. "But of course, it can't know all the technical expressions, names and so on that we use in our business.

"We have to train its 'artificial intelligence,' so that it won't translate, say, the German city of Darmstadt into 'bowel town,' or the technical termTastverhältis ('pulse duty factor') as a 'touching relationship.'

To get the highest possible speed out of Metal, PKI has recently devised a three-step program. First, they're standardizing the terminology. Second, they're making all new texts available in machine-readable form. And third, since today's scanners and optical character recognition (OCR) software can't read microfilm printouts, the company's entire archives are being rekeyed on PC's. In addition, the hardware has also been improved. "We found our original MX-2 with its four terminals to be a bit slow for our demands. So we've now upgraded to a more powerful MX300/20 with eight terminals," says Little.

"The next step will be to incorporate desktop publishing into the system and make it work with our Sun workstations, so that we'll be able to import text directly into Metal."

After the first six months of use, Patrick Little is impressed with his new metallic colleague. "We're looking forward to getting our hands on the next Metal program, which will allow us to work in the other direction. That is: English-to-German.

"So far, our experience has been that the more standardized a text is, the better the Metal translation will be. For example, blueprints are much easier to work on and need much less proofreading than system descriptions or marketing documents. "Text in which opinions are expressed, such as conference protocols, business reports or press information, are still too complicated for Metal."

STAND UP LITTLE MAN
"When it comes to individuality, the human being will never be beaten by a machine," says Little. "But with every translation we do on Metal, we expand its internal dictionary, thus improving its ability to handle more and more complex texts.

"What we really like about Metal is its user-friendliness. None of us here had had much experience with electronic dataprocessing. But even so, we didn't have too many problems. "Most were of the kind that you can laugh about afterwards. For instance: during the log-in procedure, the computer asks questions and offers the answers Y, N and P.

"While Y and N were obvious, we all thought that P stood for 'Perhaps.' We were a bit deflated when it turned out to stand for 'Proceed.'"

Ralf Kohlrausch *is LT's new German correspondent*