BIJLAGE H

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High Quality Printing of TEX - DVI Output Files in the VAX/VMS Environment

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Océ-van der Grinten N.V. is the parent of an international group of companies, the Océ Group, which distributes, produces and develops a large range of copiers and copying supplies as well as office automation products, including word processors and laser printers, for both commercial and design engineering offices.

Océ-Nederland B.V. has developed the Océ 6750 laser printer. This printer is based on the well-known engine of the Océ 1900 copier family. The laser printer has a resolution of 508 dpi (20 dots/mm). The printspeed is 23 pages per minute. The heavy duty engine prints a target load of up to 200,000 pages per month. Paper input and paper output are as advanced as usual for the Océ copiers. The level of quality printing of the Océ 6750 laser printer is perfectly suited for printing the output of the high quality typesetting program TEX. For this reason Océ has developed software for connecting the Océ 6750 laser printer to a wide range of VAX/VMS computers. On these VAX/VMS computers TEX runs as an application and the TEX-DVI files are converted to the ECMA/ODA protocol of the Océ 6750 laser printer. The combination of the high quality typesetting program TEX, the VAX/VMS computer and the Océ 6750 laser printer is responsible for a high level of quality printing.

The Océ 6750 laser printer

In this part we will describe the printing process. The information of the VAX/VMS computer is received via an IEEE 488 interface. This information has the ECMA/ODA format and is processed in the Raster Image Electronics. Here the information is converted into pixels, a processable form for the Laser Scan Module. The electrophotographic process consists of six steps:

1. charging
2. exposure
3. developing
4. transferring
5. fusing
6. cleaning

1. Charging.

The 370-inch continuous photoconductor is a polyester belt coated with a thin layer of zinc-oxide. Zinc-oxide has the following characteristics: in the dark it is not electrically conductive. It is an insulator. But when you expose zinc-oxide to the light it becomes a conductor. The photoconductor is charged from the corona unit.

2. Exposure.

The charged parts of the photoconductor move in the direction of the exposure area where the Laser Scan Module will expose the photoconductor. The laser discharges the non-black part of the image (write white engine). The black part of the image is still charged and is called a latent image.

3. Developing.

This image has to be made visible. The process is called developing. The latent image is passed along a rotating metal tube to which toner has been applied. We use a dry monocomponent toner. The toner particles on the tube are attracted by the electrical charge of the latent image. Now we have a visible black image on the photoconductor.

4./5. Transferring and fusing.

The next task is to bring the image to the paper. This is achieved in two transfer steps. In the first transfer step a soft belt is pressed up against the photoconductor and picks up the image. The rubber belt is heated and at a temperature of 105 degrees Celsius, the melted toner is fused on the warmed paper (second transfer step). The paper has been fed from one of the two paper trays.

6. Cleaning.

The final step of the process is to discharge the photoconductor and then brush off the toner residue. The photoconductor is now ready for recharging.

The size of the toner particles, the spot size of the laser and the described process are of great importance for the final print quality. The benefits of this process are a high image resolution, uniform density, consistent quality from first to last print, no developer to be mixed, no direct contact between photoconductor and paper, no paper jams.

As mentioned in the introduction the paper handling is as advanced as usual for Océ copiers. This includes the following:

- *Input.* The printer has two input trays (1600 + 600 A4 sheets) available. The large capacity and the fact that the paper compartment is outside of the printer give you the possibility of non-stop printing.
- *Output.* The sorter with 20 selectable bins of 100 sheets each takes care of the collation and storage of a large capacity of 2,000 sheets. You can use the ergonomic designed sorter in a personal, set or sortwise printing mode.

ODA

As stated the Océ 6750 laser printer uses the ECMA/ ODA protocol.

What is ODA?
ODA, Office Document Architecture, is an international standard which offers a solution for integrating office systems. ODA is an interchange standard for multi-media documents which has been produced in order to allow documents (text and/or graphics) to be interchanged between computer systems anywhere in the world. ODA documents can contain information represented in the form of character text, raster graphics and geometric graphics. ODA enables communicating systems to interchange documents across networks with the integrity of the content, format and layout. It is possible to reproduce, reprocess, store or print the document in the form intended by the originator. To assist in the integration of computer systems, ODA employs the following established standards:

- the character content of ODA is compatible with ISO 6937, and thus with Telex and Teletex.

- the geometric graphics content is compatible with ISO 8632, and thus with the GKS/CGM family of graphics standards.
- the raster graphics content is compatible with CCITT Recommendations T4 and T6 and thus with group 3 and group 4 facsimile.

At Cebit 1988 and 1989 at Hannover ODA was used to demonstrate mixed media document interchange. Complex pages of text, image and graphics were originated by one company, displayed and edited by a second company and printed by the Océ 6750 laser printer with communications via X.400 mail and X.25 lines.

Interfacing to VAX/VMS computers

With the standard IEEE 488 interface of the Océ 6750 laser printer it is very easy to connect the printer to a wide range of VAX/VMS computers. In the VAX/VMS computer range we find three types of busses:

1. Q-bus
2. Unibus
3. BI-bus

Connecting the Océ 6750 to a VAX with respectively one of these busses can be done with standard from Digital Equipment Corporation available IEEE boards and drivers. Besides the hardware and the driver you need host resident software for the communication with the printer and the conversion of TEX-DVI files to ECMA/ODA. The software developed by Océ contains:

1. the printer protocol
2. the symbiont
3. the conversion programs
4. the font management tools

1. The printer protocol

The Low Level and the High Level Printer Protocol (LLPP and HLPP) take care of the cooperation between symbiont and the IEEE 488 device driver. The printer protocol is used for informing the host about the printer status and setting the printer in a certain status. The font downloading procedures are also implemented in the printer protocol. Other typical tasks of the printer protocol are:

- sending/receiving packets to/from the Océ 6750
- initialize the printer at start time
- converting messages to packets (two way)
- font management

2. Symbiont

The standard symbiont of the VAX was not applicable to control the conversion programs and the communication between the user and the printer (two input trays, 20 output bins, setwise, sortwise or personal printing, handle messages coming from the printer etc.). Océ developed a symbiont specially for the 6750. The symbiont controls all the conversion programs and interacts with the job controller. Typical aspects of the symbiont are:

- errorhandling
- starting and controlling the HLPP and conversion programs
- communicates with the job controller
- interpretes the DCL extensions and options

- including burst/flag/trailer pages

3. Conversion programs

The conversion programs re-sort under the "umbrella" of the symbiont and take care of several conversions to ECMA/ODA, the input standard of the 6750 laser printer. There are converters for:

- LN03 Plus to ECMA/ODA
- Lineprinter to ECMA/ODA
- TEX-DVI to ECMA/ODA

4. Font management tools

With an easy to use font-tool it is possible to use Metafont to generate PXL-fonts. These are transformed to the Océ format and can be downloaded to the printer.

The combination of the high quality typesetting program TEX, the VAX/VMS computers and the Océ 6750 laser printer is responsible for producing high quality documents.

If you wish to receive an original set of printouts or additional information, please contact:

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BIJLAGE I

A dBase III+ programme to generate a journal

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This is a note about the implementation of a combination of dBase III+ and TEX. From the 1989 volume onwards the *Statistics Theory and Methods Abstracts (STMA)* journal is being typeset by its editors. For this purpose the permanent office of the *International Statistical Institute* at Voorburg has purchased an Olivetti 380 S with a 40 Mb disc, a tapestreamer and a HP laserprinter.

The journal production process, has been streamlined considerably and now proceeds roughly as follows. Abstracts on relevant papers are written and classified as soon as new journals arrive. The classification is in accordance with a scheme of some 260 classes. Every three months approximately one thousand abstracts are put out. The papers abstracted have one to four authors, an address of the first author, a title, a language, journal information: year, volume, issue, first page, last page and the number of references. Together with this information, the abstract is included in one record. The abstract varies in length from a few hundred to more than one kilobyte. Naturally, the abstract is put in a "memo" field. Title as well as abstract may contain any sort of maths.

The maths mentioned at the end of the last section persuaded us to go for AMSTEX. The use of a database is dictated by the various ways a reference journal must provide entries to its subject matter. The abstracts are presented in the order of their classification number. This has to be arranged at the very last minute before printing, because material becomes available in random order. For a sequence of abstracts to be satisfactory, there must be sorting on journal, year, issue, first author and first page as well.

For the right emphasis in context, authors names are displayed in capital letters, but occur in the author index in lower and upper case. This causes some problems, as many foreign names with foreign accents and foreign conventions have to be dealt with. Also, authors names have to be listed alphabetically from time to time. This aspect is implemented by deriving a capitalised name through standard conversion except for TEX codes like \b \c \d \u \v \t. For the sake of ordering the authors alphabetically, their names are stripped of all nonletters and are capitalised subsequently. Further, words like Mac and jr. are not capitalised. To this end the latter are to be input as M%a%c and %j%r.

All regularly recurring journal names, addresses and text are coded for efficiency. Thus there is a list of affiliations and a journals list. Incidentally, the latter is kept also to be output yearly and for keeping track of their occurence through the year. Also, full use is made of the coding facilities which the editor (PC write) provides, while the remainder of the standard words like "probability" or "estimator" are coded using TEX.

There are several ways the output of the database can be sent to TEX. For the sake of proof corrections it must be in order of input, either all abstracts or only those actually corrected. The final output for an issue is about 1.3 Mb. That is fine if impeccable, but in order to enable any final correction, it is broken up into six files. We have not yet found an editor that can handle files beyond memory capacity, except View on the old Acorn BBC.

Another problem met with DOS concerns switching from dBase to TEX. It appears that the

RAM-memory often was not fully released for use to TEX and memory shortage was encountered. This has been resolved satisfactorily by the timely release of a set of software called TSR Utilities Version 2.5. The TSR Utilities include programs useful in managing DOS memory, and in particular managing memory-resident utilities. TSR stands for "Terminate and Stey Resident". Before entering dBase a mark is set in memory; after leaving dBase, the memory above the mark is released.

The TEX source file is actually produced by dBase in a fairly roundabout way. There appears to be no straightforward method to send dBase output to a file rather than to the printer if the output is anything less than standard. Use is made of a sort of log file called "alternate". This is initiated by issuing "set alternate to ABSTRACT.TEX", "set alternate on". The text subsequently scrolls over the screen, all 1.3 Mb of it! There appears to be no way to avoid this.

Apart from the previous minor inconvenience, several problems of similar type were encountered with dBase. One which initially caused great problems was an unlisted anomaly with "set order to order 0", This is supposed to make the database available in input order, while keeping current index files uptodate. The latter does not materialize. Ashton-Tate has not been forthcoming with a way around this; we use "reindex" at present.

A properly documented inconvenience is the illogical way a macro is dealt with by the "do while" command. A macro is a substitution convention: if I=3, AUTHOR&I is AUTHOR3. A "do while" loop however does evaluate such a macro only once.

Finally, there have been some odd records that could not be persuaded to be included in an index for no apparent reason. The latter is on the whole a rather atypical occurrence with dBase III+. It is very reliable and includes many safety features to the point of being almost fool proof. Above all, it is extensively used by so many, that available documentation is unsurpassed.

BIJLAGE J

TEX and SGML

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Contents

1 Setting the scene

1.1 Lifecycle-phases of documents

- preparation
- distribution
- reading
- storing (Paper? Electronically? Optically?)
- other usage, reuse?

SGML supports the *complete Lifecycle*, where FUTURE usage of the document is not necessarily restricted to printing.

TEX supports formatting and electronical exchange.

2 What is SGML?

It stands for:

Standard Generalized Markup Language

For the definition see, [20]. An introduction is [8], and courseware is [11]. A Dutch chapter of the SGML Users Group exists.[2]

[1]Paper presented at: 2^e SGML Holland users group seminar 'De Rol van SGML in de praktijk', 27 oktober 1989, Amsterdam.
[2]SGML-Holland Secretary: D. van Wijnen, Wolters Kluwer. P.O. Box 989, 3300AZ Dordrecht. 078–334933.

2.1 Purpose

To facilitate INFORMATION exchange

— *Then ánd There* —

via a description LANGUAGE, where information is packed in documents, containing, text, graphics, ...

2.2 $\mathcal{META}$ LANGUAGE

SGML is a $\mathcal{META}$ LANGUAGE which can be used to define an arbitrary number of markup languages in a standardized way.

2.3 Markup

Formerly: (typeset)MARKS in the margin
(Marks are bound to a version; no 'data-integrity')

Presently: Marks are integrated with copy
(Note: Discriminate copy from MARKUP! Data-integrity is preserved.)

Markup $\stackrel{\text{def}}{=}$ Term used to describe codes added to the electronically prepared document

2.4 Generalized

Formerly: (typeset)MARKS for *specific* 'here and now' printers

Presently: Marks are *generic*
(Not specific to print/plot/photoset hardware)

Generalized $\stackrel{\text{def}}{=}$ Abstraction from the specific to the general to describe the structure of a document and to specify intent without regard for appearance

2.5 Standard

Formerly: no consensus on mark-up 'codes'
(wordperfect, wordstar, applewrite, ...; Scribe, TeX, LaTeX, ...)

Presently: SGML ISO standard

Standard $\stackrel{\text{def}}{=}$ It can be used to define an arbitrary number of markup languages in a *standardized* way.

Entails: general applicability,
longer lifetity,
improved reusability,
enhanced exchange possibilities.

2.6 Example markups

2.6.1 No markup

```
TeXAsystemforformattingtextTeXandtheaccompanying
macropackageLaTeXprovidepowerfulmeans ...
```

2.6.2 Presentational markup

```
TeX:
A system for formatting text.

  TeX and it's accompanying macro package LaTeX provide
powerful means of formatting text to be output on either
  - a simple matrix printer,
  - a laser printer or
  - a photo typesetter.
```

Nice in this context is poetry, e.g., Alice's mousetail, [6], or DEK's favourite poem of Piet Hein, [24].

2.6.3 Procedural (LaTeX) markup

```
\subsection{\TeX}
A system for formatting text.
\par
  \TeX and it's accompanying macro package \LaTeX\ provide
powerful means of formatting text to be output on either
\begin{itemize}
\item simple matrix printer,
\item a laser printer or
\item a photo typesetter.
\end{itemize}
```

2.6.4 Descriptive (SGML) markup

```
<h>&TeX;
<p>A system for formatting text.
<p>&TeX; and it's accompanying macro package &LaTeX; provide
   powerful means of formatting text to be output on either
<li>
<it> simple matrix printer,
<it> a laser printer or
<it> a photo typesetter.
</li>
```

2.7 What is SGML not?

- No WYSIWYG (WYSIWY(A)G, ...) way of working
- Not a formatter, certainly not a standard formatter

3 What is TeX?

TeX is a formatter for 'making beautiful books', developed by Knuth, [23]. An introduction is given in [7].
LaTeX, [29], is a macro collection for simplified use of TeX, in the *procedural* markup way. A Dutch TeX Users Group exists.[3] Courseware is [10].

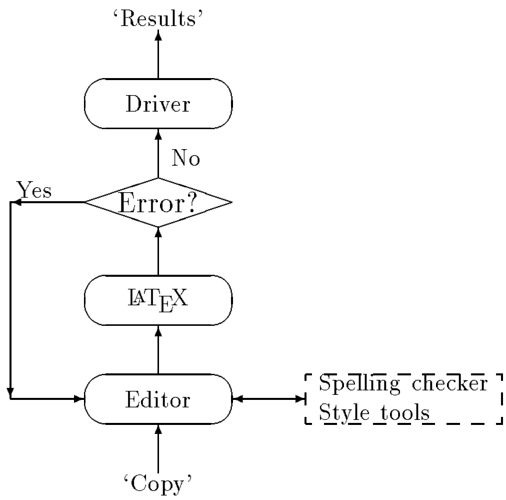
[3]NTG: Nederlandse TeX Gebruikersgroep. Secretary: G.J.H. van Nes, ECN, Postbus 1, 1755ZG, Petten. 02246–4185; e-mail: vannes@ECN.NL.

3.1 Processing LaTeX

‘LaTeX’ is processed in three steps

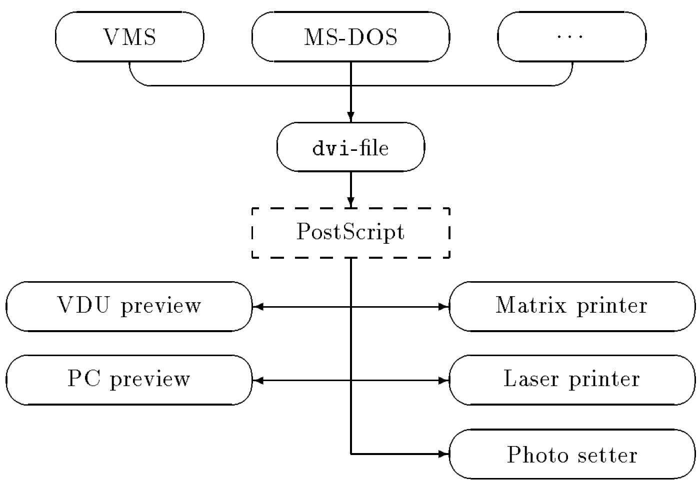
$$\text{‘copy’} \overset{editor}{\rightarrow} \texttt{ASCII} \overset{LaTeX}{\rightarrow} \texttt{dvi}\text{-file} \overset{driver}{\rightarrow} \text{‘results’}$$

The more steps the more difficult is correction handling



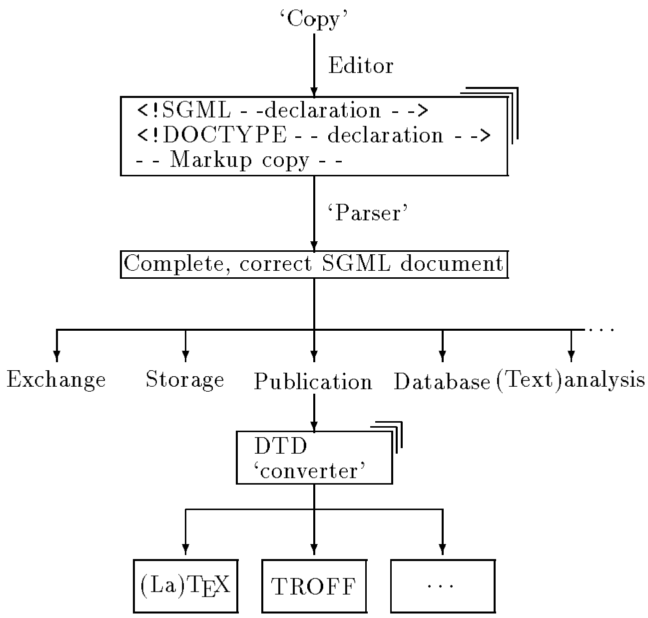
3.2 Availability

TeX is available on many computers under various operating systems with a variety of drivers for the VDU (previewing), printer (hardly any), and photo setter. So documents written in (La)TeX can be ported. Sending documents via e-mail is also generally possible except for the incorporated graphics. When graphics is part of the document TeX combined with Postscript is used within the TeX community. TeX is in the public domain. Drivers and in general added value by companies have to be paid for. See ads in [36].



4 Relationship: SGML, TEX and ...

The relationship of TEX, SGML and other applications is illustrated in the diagram below. The coupling — 'converters' — can be done in SGML, in TEX or via special 'compilers'. An integrated — ikons user interface, SGML layer, TEX layer, Postscript handling (optionally) with SGML, TEX and dvi files available — implementation is Arbortexts' The Publisher on a SUN.



5 Examples

5.1 Letter

5.1.1 Structure

- Background
  Heading (Logo, address, phone, ...)
  Footer (numbering, ...)
- Context (running heads next pages, ...)
- Reference
- Your reference
- Date
- Addressee (name, company, address, zip code)
- Beginning (Dear...)
- Contents
- End matter (Salutation, name, position)
- Additions (PS, enclosure, cc)

5.1.2 Letter result

Because a sample LATEX letter could not be processed simultaneously in this context, the result is omitted. (Of course it could be pasted in, but that is not available electronically; it has been 'pasted into' the transparencies)

5.1.3 SGML markup

```
<!DOCTYPE letter PUBLIC
  -- DTD to be used  --
  "-//NTG//DTD Letter//EN">
<letter -- start-tag -->
<ref> CGL/Ba/B89-007
<yourref> MC/L1/L89-001
<date> 4 august 1989
<address> Malcolm Clark
     Imperial College Computer Centre
     Exhibition Road
     London SW7 2BP, England
     janet: fps@uk.ac.ic.cc.vaxa
<dear>Malcolm
<p> Thank you very much ...
...
<p> Some details about the course ...
...
<signed name=CGL>
</letter -- end-tag -->
```

5.1.4 LaTeX specification

```
\documentstyle[12pt]{letter}
  \address{% return address
          C. G. van der Laan   \\
          \ldots}
  \signature{Kees}
\begin{document}
{\LARGE % This size just for transparency
\begin{letter}{% address
          Malcolm Clark       \\
          \dots}
% no ref or your ref
% date is handled automatically
\opening{Dear Malcolm}
\par
Thank you very much \ldots
\begin{quote}
$\vdots$
\end{quote}
Some details about the course \ldots
\begin{quote}
$\vdots$
\end{quote}
\closing{Best regards}% Handles signature
%ps, cc, enclosure all possible
\end{letter}
}
\end{document}
```

5.2 Bridge card deal

The LaTeX aspects have been published in [25]. An SGML elaboration has been done by Grootenhuis, [17].

5.2.1 LaTeX result

N/None	♠ J74 ♡ AJ ♢ QJT2 ♣ Q874	Deal: demo
♠ A3 ♡ K76 ♢ 963 ♣ KJ952	N W E S	♠ K86 ♡ T9542 ♢ 874 ♣ T3
	♠ QT952 ♡ Q83 ♢ AK5 ♣ A6	

5.2.2 SGML markup

```
<deal><vuln>N/None
      <comm>Deal: demo
<hand n>&spades;J74
        &hearts;AJ
        &diams;QJT2
        &clubs;Q874
<hand e>&spades;K86
        &hearts;T9542
        &diams;874
        &clubs;T3
<hand s>&spades;QT952
        &hearts;Q83
        &diams;AK5
        &clubs;A6
<hand w>&spades;A3
        &hearts;K76
        &diams;963
        &clubs;KJ952
</deal>
```

5.2.3 LaTeX specification

```
\crdima{N/None}{%
  \begin{minipage}[t]{\br}
     Deal:\\demo
  \end{minipage}}%
  {\hand{J74}{AJ}{QJT2}{Q874}}%N
  {\hand{K86}{T9542}{874}{T3}}%E
  {\hand{QT952}{Q83}{AK5}{A6}}%S
  {\hand{A3}{K76}{963}{KJ952}}%W
```

+

5.2.4 LaTeX macros

```
\newcommand{\hand}[4]{
 \begin{minipage}[t]{\br}%I chose \br=8em
 \begin{tabbing}
 %width of parbox equals:
 %min{\br, max{string #1, ..., string #4}}
  \(\spadesuit\)  \= #1 \\
  \(\heartsuit\)  \> #2 \\
  \(\diamondsuit\)\> #3 \\
  \(\clubsuit\)   \> #4
```

```
 \end{tabbing}
 \end{minipage}      }%end \hand
%
\newsavebox{\NESW}
\savebox{\NESW}[4em]{%
\raisebox{-1.5\baselineskip}%
{\fbox{\small W
   \raisebox{2.6ex}{N}
   \hspace*{-1em}
   \raisebox{-2.6ex}{S}
   {E}
      }
}                    }%end \NESW
%
\newcommand{\crdima}[6]{%
\begin{tabular}[t]{lll}
 #1 & #3             & #2\\
 #6 & \usebox{\NESW} & #4\\
    & #5             &
\end{tabular}          }%end \crdima
```

5.2.5 SGML requirements

Declarations needed in DTD

```
<!ENTITY % ISOpub PUBLIC
  "ISO 8879-1986//ENTITIES Publishing//EN">
<!ELEMENT deal -- (vuln, comm?, hand*)>
<!ELEMENT (vuln|comm) - o CDATA>
<!ELEMENT hand - o (RCDATA, CDATA,
                    RCDATA, CDATA,
                    RCDATA, CDATA,
                    RCDATA, CDATA)>
<!ATTLIST hand nesw (n|e|s|w) #REQUIRED>
```

5.3 Some Math

5.3.1 LaTeX results

$$X \cap (A \cup B) = (X \cup A) \cap (X \cup B)$$

$$x \notin A \not\subset B$$

$$\|a(x+y)\| \leq |a|.(\|x\| + \|y\|)$$

$$\int \frac{1}{\sqrt{1+x^2}}\, dx = \log(1 + \sqrt{1+x^2})$$

5.3.2 SGML markup

```
<fd>X&cap;(A&cup;B)=
     (X&cup;A)&cap;(X&cup;B)</fd>

<fd>x&nisin;A&nsub;B</fd>

<fd><fen d>a(x+y)<rp d></fen>&le;
  <fen>a<rp></fen>.(<fen d>x<rp d></fen>
  +<fen d>y<rp d></fen>)
</fd>
```

```
<fd><in><opd><fr>1</><rad>1+
  x<sup/2/</rad></fr>dx</in>=
  <rf/log/(1+<rad>1+x<sup/2/</rad>)
</fd>
```

Note. DTD used is an adapted version of AAP's DTD by D.C. Coleman, [26].

5.3.3 LaTeX specification

```
X\cap(A\cup B) =(X\cup A)\cap(X\cup B)

x \notin A \not\subset B

\|a(x+y)\| \leq |a|.(\|x\|+\|y\|)

\int\!\frac{1}{\sqrt{1+x^2}}\,dx
=
\log(1+\sqrt{1+x^2})
```

6 Developments

A survey is given in [8].

6.1 Usage

- DOD (Automated Technical Order System)
- European Communities (FORmalised EXchange of Electronic Documents; office official publications)
- Publishers (AAP, British Library, KNUB(Elsevier, Kluwer, ...), ...)
- Her Majesty's Stationary Office (legal text)
- HP Technical documentation
- Oxford University Press (abridged forms, database applications)
- McGraw Hill Encyclopedia of Science and technology (CD-ROM)
- SGML Users Group (chapters in various countries)
- ...

6.2 Plans

- DOD (Computer-aided Acquisition and Logistic Support)
  Object: To produce an integrated system in which information is held electronically, and which interfaces to CAD/CAM systems, electronic publishing systems and databases and those operated by the many defense contractors who supply the department, so that it will be possible to receive, distribute and use technical information in digital form.

6.3 Local work in progress

- Elsviers' experiment, [2]
- Examples tabular matter (LaTeX and SGML)
- Coupling SGML to LaTeX
- ...

Acknowledgements

This article is an article representation of a presentation prepared via TRSPAR.STY the authors' modification of REPORT.STY. Although the structure is such that the TRSPAR copy can be processed by any other style, the file needed some adaptation. E.g. some more text here and there, removing \Large from within the description labels, adaptation of the minipage size, and omitting \Large in the literature list. The latter is used by the author to supply the full literature list on the hand-outs of the transparencies while attention is focussed on the enlarged items on the transparency.

Most SGML codings are tentative, only the original SGML codings of mathematics have been parsed, [26]. No coupling of SGML to LaTeX has been done yet by the author.

This paper has been set by TeX and is written in LaTeX.

References

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BIJLAGE K

Ervaringen met fotozetters

Sinds enige tijd bestaat de mogelijkheid om bij A.J. Scholten - Transcripta fotozetsel van tex/dvi-files te laten maken. Het grote voordeel van Transcripta is dat er uitsluitend met TEX gewerkt wordt en derhalve zeer veel deskundigheid bij het bedrijf in huis is. Men beschikt over een Linotronic 100, die een resolutie levert van 1270 dpi. Dit is voor alle tekstmateriaal ruimschoots voldoende, aangezien het menselijk oog zijn natuurlijke beperkingen heeft. DVI-files moeten worden aangeleverd op 5 $\frac{1}{4}$ inch MS-DOS floppies, andere formaten en besturingsystemen worden niet verwerkt. Het is nuttig om ook de tex-bron-file mee te sturen, bijvoorbeeld in verband met fouten, etc.

Bij Transcripta heeft men alle cm-fonts en verder de Postscript-fonts: Times-Roman, Helvetica en Courier. Verder is een groot aantal Bitstream-fonts aanwezig. De mogelijkheid bestaat ook om in overleg eigen fonts, die met Metafont zijn gemaakt, te gebruiken.

Transcripta gebruikt als Postscriptdriver de DVILASER van Arbortext, die het grote voordeel heeft dat bij een normaal boekbladspiegel van ongeveer 20 cm bij 13 cm twee pagina's in landscape op een A4-tje kan afdrukken. Dit drukt de kosten met 50%, aangezien de prijs per A4 wordt berekend en niet per tijdseenheid of iets van dien aard.

De prijs per A4 bedraagt 8 gulden, exclusief 18,5% B.T.W. en verzendkosten.

Transcripta werkt snel; mijn ervaring is dat een manuscript van 200 bladzijden binnen 3 dagen retour is. STYX-Publications heeft het afgelopen jaar op deze wijze 5 boeken (ongeveer 1000p.) op deze wijze met TEX geproduceerd.

Verdere inlichtingen zijn te verkrijgen bij Janneke Scholten, Hemweg 6, Wijdenes, telefoon: 02293-1795.

Geerd Haayer, STYX Publications

BIJLAGE L

Verslag GUTenberg (16/17 mei 1989)

GUTenberg bijeenkomst

Thema: TEX en Grafische zaken

16-17 mei, 1989

1 Algemeen

Als NTG-voorzitter was ik uitgenodigd en hoefde ik geen deelnamekosten te betalen. Het was heel nuttig kennis te maken — in levende lijve — met Amerikaanse (Barbara Beeton) en Europese (Malcolm Clark) TUG bobo's.

2 Reizen

De reis was onderdeel van een groter geheel:
NTG-bijeenkomst in Leidschendam (11 mei),
GUTenberg bijeenkomst (16-17 mei),
SGML seminar in Utrecht (19 mei).
's Morgens 11 mei vertrokken naar Leidschendam. Vandaar aan het eind van de middag doorgereisd naar Parijs. Donderdagavond 18 mei de nachttrein naar Rotterdam en doorgereisd naar Utrecht. Door deze aanpak was er slechts een treinkaartje nodig: Parijs ↔ Garnwerd. Tijdens de Pinksteren was de 'zonnekoning' tastbaar aanwezig in Versailles.

3 GUTenberg bijeenkomst

De eerste dag stond in het teken van cursussen. Er waren er twee: LATEX resp. Metafont voor 'beginners'. Ik heb de metafont cursus gevolgd volgd. Deze gaf een zeer goede indruk van hoe Metafont te hanteren. De docent, Victor Ostromoukhov, was bereid ook voor de NTG een dergelijke cursus te houden. (Dit jaar kwam ongelukkig uit. Over de condities hebben wij het nog niet gehad!).

's Avonds was er een diner voor de genodigden van de zusterverenigingen, DANTE en NTG, waarbij Malcolm Clark ook aanwezig was. Hier hebben wij tussen de happen door de Europese samenwerking en de relatie met TUG besproken. Het eten was lekker en het volgende werd ondertussen 'opgedisd':

- Eén Europees blad, analoog aan TUGboat, i.p.v. TEXline, Cahiers GUTenberg, DANTE's..., NTG's... en ..., versus de nationale bladen. [1]
- Waar zijn de Italianen gebleven en hoe zit het met degenen die er (nog) niet zijn: Zweden, Grieken, ...? Wat doen wij hieraan?

[1] Zoals misschien bekend ligt dit bij de nationalistische Fransen erg gevoelig. Ook was verrassend vanuit Duitsland te horen dat men daar erg veel behoefte heeft aan documentatie in de eigen taal. Het is dus niet erg reëel om op een Europees blad te hopen; daarnaast zijn er nog andere voetangels en klemmen: Wie doet wat? Welke taal, of talen? For the time beeing is het eenvoudiger eigen blaadjes te hebben naast TUGboat als bindend (kwaliteits)element.

- Elk land heeft TEX boek(en) in de eigen taal. Waarom geen Engelstalige, zodat wij beter elkaars werk kunnen gebruiken? Inmiddels zijn verschenen: Nederlandse LATEX boek, diverse Duitse boeken en vers van de pers: Le petit livre de TEX. [2]
- Vanuit NTG werd ondermeer voorgesteld met de fileservers, specialisatie na te streven. Dit zou de schijfbelasting en het onderhoudsaspect verminderen. [3]
- Waarom werken wij niet aan Europese (sjabloon) sty-files, voortbordurend op het werk van Hubert Parl, Johannes Braams, Victor Eijkhout, to name but a few? [4]
- Aan TUGboat is voorgesteld summaries in andere talen bij de artikelen te voegen. Men vermoedde dat men slechts Engelse artikelen aan kon bieden; dit bleek een onjuist vermoeden te zijn. Barbara B. vond het een zinnig idee en zou het meenemen. Overigens heerste er de indruk dat de Amerikanen zich weinig gelegen laten liggen aan wensen vanuit Europa. [5]
- De Fransen stelden aan het eind simpel voor: vertegenwoordigers van zusterverenigingen uit te nodigen op de locale TEX dagen en leden van zusterverenigingen te beschouwen als leden van de eigen vereniging wat betreft deelnamekosten. Zowel Lammarsch als ik stonden hier sympathiek tegenover, maar stelden dat wij dit met onze achterbannen zouden bespreken. [6]
- Verder is afgesproken dat wij informatie zouden uitwisselen en ernaar zouden streven op de navolgende nationale bijeenkomsten dergelijke samenwerkingsvergaderingen te houden. Utrecht 29/30 juni vond ik te vroeg, vandaar dat de eerstvolgende bijeenkomst in Duitsland is (4–6 oktober), waarbij DANTE de gastheer is. De meeste aanwezigen nemen ook deel aan 'Ten Years of TEX' in augustus waarbij ik helaas niet aanwezig kan zijn, of is er nog wat geld? In ieder geval treffen wij elkaar op de Europese bijeenkomst in Karlsruhe, 11–13 september. De verdere uitwisseling van informatie is nog niet concreet geregeld, afgezien van de electronische adressen, waarvoor ik een verzendlijstje zal openen. (Bernard Gaulle heeft mij op de GUT@FRULM11 list gezet; of ik daar nu erg blij mee ben is de vraag).
- T.a.v. het anonieme vragenstellen kan ik mij voorstellen dat wij elkaars listservers openstellen. Daarnaast is het direct stellen van vragen over Metafont aan Victor O. (victor@elma.epfl.ch), de Metafont docent van de eerste dag, een aardige mogelijkheid. Ik heb mij laten vertellen (door Karman) dat de buitenlandse listservers open zijn.

De tweede dag was volledig gewijd aan 'TEX en grafische zaken'. Een voortreffelijk overzichtsverhaal werd gegeven door Nelson Beebe — ja, ja, inderdaad, de man van de driver's — 'TEX and Graphics: The state of the problem'. Dit Engelse verhaal evenals de overige Franse verhalen zijn opgenomen in de proceedings: Cahiers GUTenberg, 2, Mai 1989.

Stand van zaken bij de Fransen

Zij hebben ongeveer 200 leden.
Zij komen 2 à 3 maal per jaar bijeen.
Een fileserver is nog niet operationeel.
Zij hebben een listserver: GUT@FRULM11.
Zij hebben een blad: Cahiers GUTenberg.

[2] Oké dit is nu onderkend en dus wordt het volgende NTG TEX cursusboek in het Engels, al dan niet onder Europese vlag, gemaakt.

[3] Ook wij moeten de server opkrijgen en erop zetten wat wij nuttig vinden; dit is een impliciete specialisatie, zonder monopolie met weinig overhead.

[4] De pragmatische werkwijze is: DOEN, DOORGAAN en publiceren dan wordt het wel overgenomen!

[5] Mijn eigen ervaring is niet zo. TEXHaX/MaG werken internationaal. Fileservers idem, alhoewel ik persoonlijk nog geen ervaring heb met TUGboat fileservers. (Wel met de numerieke server in Argonne National Laboratory.) TUGboat staat open voor nieuws ook aan het Europese front. Artikelen worden vrij makkelijk in TUGboat geaccepteerd. Er is een Europese TUG coördinator. Wat is er meer op hoofdlijnen te wensen?

[6] Een probleem kan zijn dat de verenigingen elkaar de ledenlijsten moeten opsturen vanwege controle. Bij ACM/NGI lidmaatschap moet men bij ACM het NGI nummer opgeven.

4 Conclusie

Het is nog niet goed mogelijk grafische zaken in TEX op een overdraagbare manier op te nemen. In samenhang met Postscript en met de beperkte functionaliteit van de picture-omgeving kan men een eind komen. Vooral met de opkomst van e-mail wil men graag documenten integraal via e-mail uitwisselen; dit staat hoog op het verlanglijstje.

Groningen, 29 mei,

C.G. van der Laan