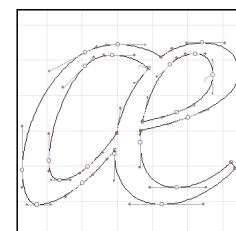
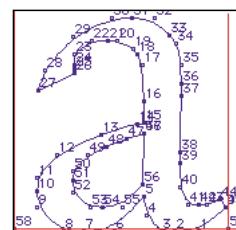


TYPE AND TECHNOLOGY



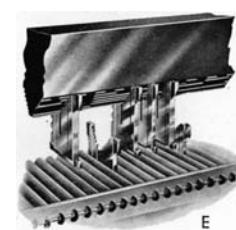
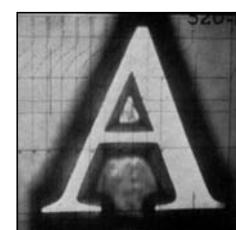
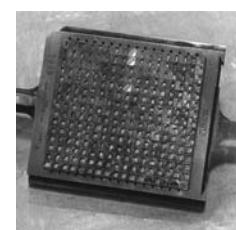
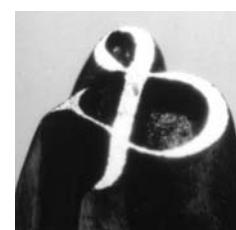
DUTCH TYPE LIBRARY



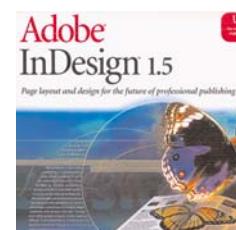
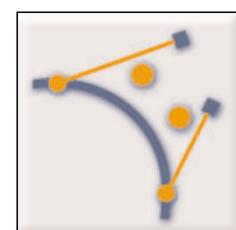
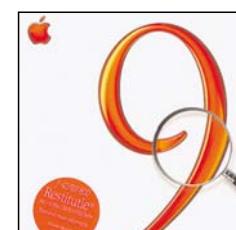
FM MODULAR STRUCTURE



FM FUTURE DEVELOPMENT



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TYPE AND TECHNOLOGY

DUTCH TYPE LIBRARY

IKARUS SYSTEM

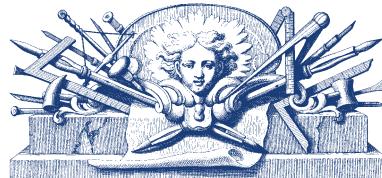
DTL FONTPMASTER

FM MODULAR STRUCTURE

FM DATA STRUCTURE

FM FUTURE DEVELOPMENT

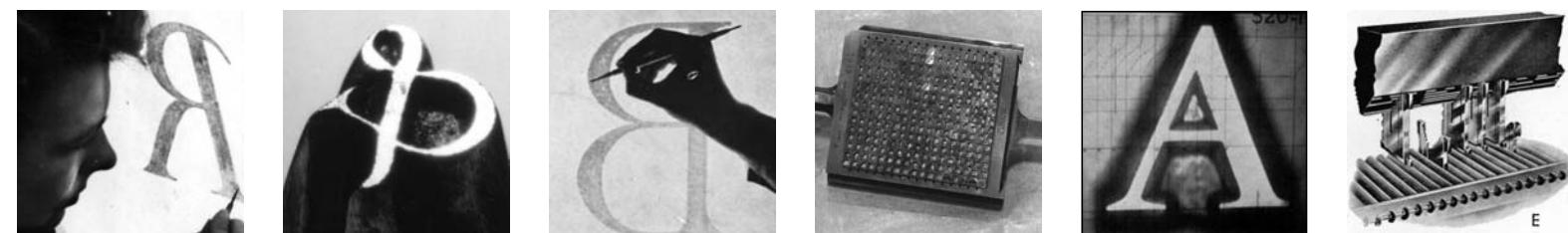
• FM DEMONSTRATION



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DTL FontMaster: *From proprietary tools to end user program*





TYPE AND TECHNOLOGY

DUTCH TYPE LIBRARY

IKARUS SYSTEM

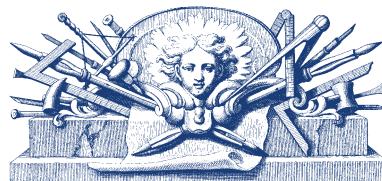
DTL FONTPRINTER

FM MODULAR STRUCTURE

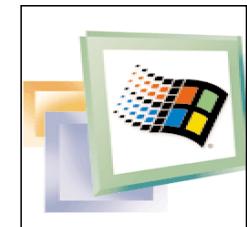
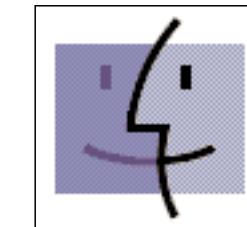
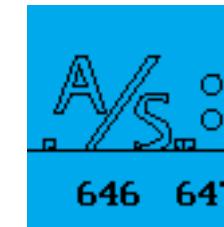
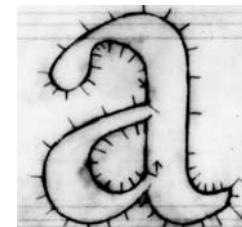
FM DATA STRUCTURE

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Type & Technology: the type user

- The typographer is in general not interested in the font production technology; the type faces should simply function properly.
- In time the technology will be mainly forgotten but well designed and produced type will remain and converted to future technology.



TYPE AND TECHNOLOGY

DUTCH TYPE LIBRARY

IKARUS SYSTEM

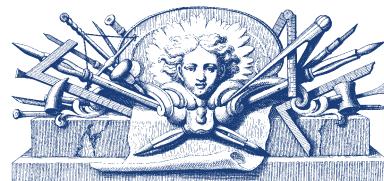
DTL FONTPROCESSOR

FM MODULAR STRUCTURE

FM DATA STRUCTURE

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Type & Technology: the manufacturer

- The type manufacturer's aim is to produce typefaces as perfect as possible – in every aspect – and at the same time economically.
- The font (re)production technology has never been so good as it is nowadays, but at the other side professional font production remains complex.



TYPE AND TECHNOLOGY

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IKARUS SYSTEM

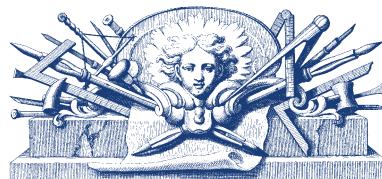
DTL FONTPROCESSOR

FM MODULAR STRUCTURE

FM DATA STRUCTURE

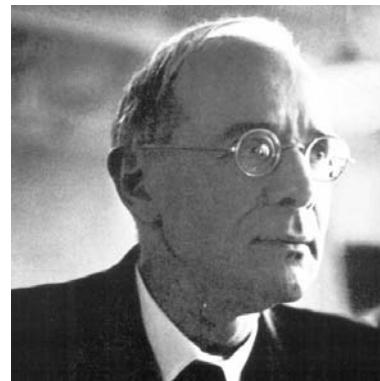
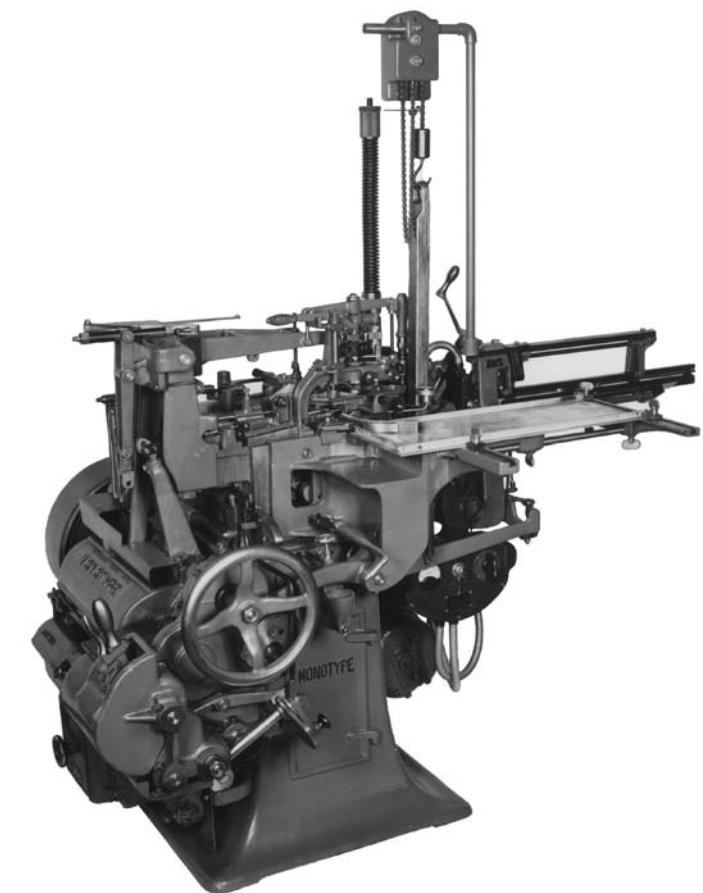
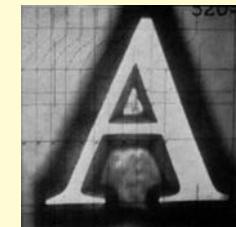
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TYPE AND TECHNOLOGY

DUTCH TYPE LIBRARY

IKARUS SYSTEM

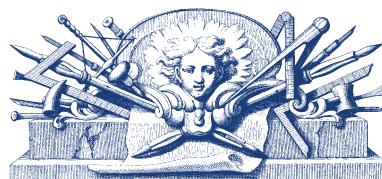
DTL FONTPRINTER

FM MODULAR STRUCTURE

FM DATA STRUCTURE

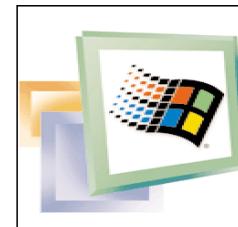
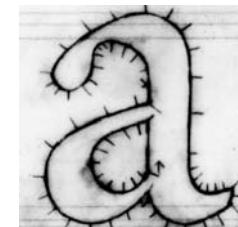
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A BCab cde fgh ABCab cde fgh

A BCab cde fg ABCab cde fg

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A BCab cde fgh ABCab cde fgh

A BCab cde fg ABCab cde fg

A BCab cde fg ABCab cde fg



TYPE AND TECHNOLOGY

DUTCH TYPE LIBRARY

IKARUS SYSTEM

DTL FONTPMASTER

FM MODULAR STRUCTURE

FM DATA STRUCTURE

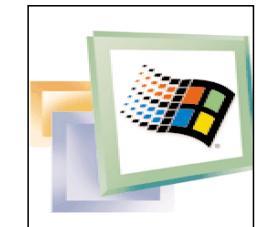
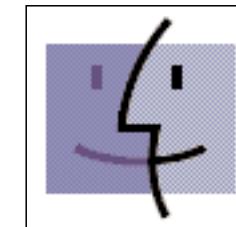
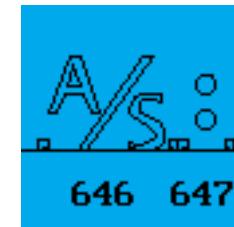
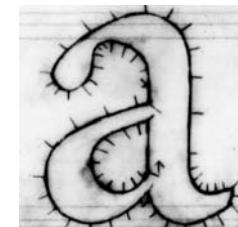
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A B C a b c d e f g A B C a b d c e f g

A B C a b c d e f g h A B C a b c d e f g h

A B C a b c d e f g h A B C a b c d e f g

A B C a b c d e f A B C a b c d e f

A B C a b c d e f g A B C a b c d e f g

A B C a b c d e f g h A B C a b c d e f g



TYPE AND TECHNOLOGY

DUTCH TYPE LIBRARY

IKARUS SYSTEM

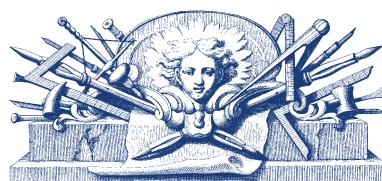
DTL FONTPRINTER

FM MODULAR STRUCTURE

FM DATA STRUCTURE

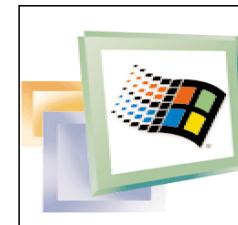
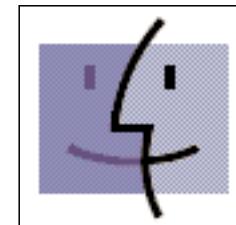
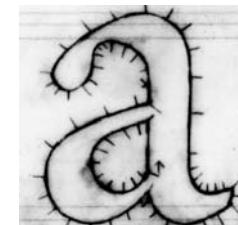
FM FUTURE DEVELOPMENT

• FM DEMONSTRATION



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A B C a b c d e f A B C a b c d e f
A B C a b c d e f g A B C a b c d e f g
A B C a b c d e f g A B C a b c d e f
A B C a b c d e f g A B C a b c d e f g
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TYPE AND TECHNOLOGY

DUTCH TYPE LIBRARY

IKARUS SYSTEM

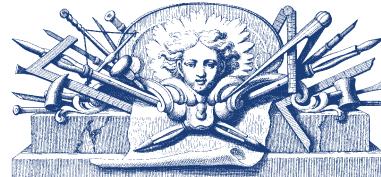
DTL FONTPROCESSOR

FM MODULAR STRUCTURE

FM DATA STRUCTURE

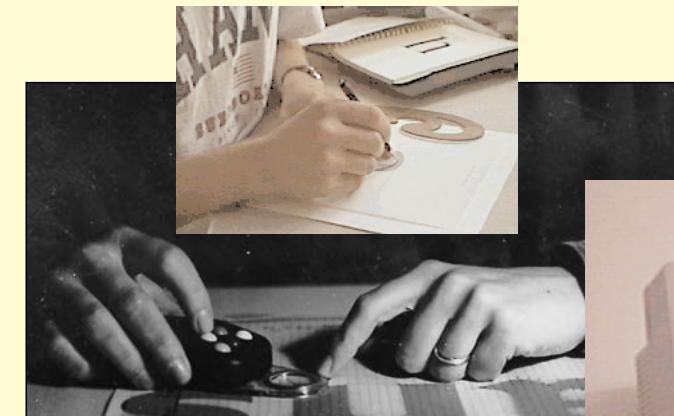
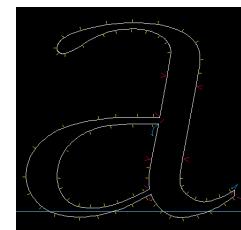
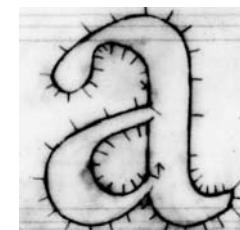
FM FUTURE DEVELOPMENT

• FM DEMONSTRATION

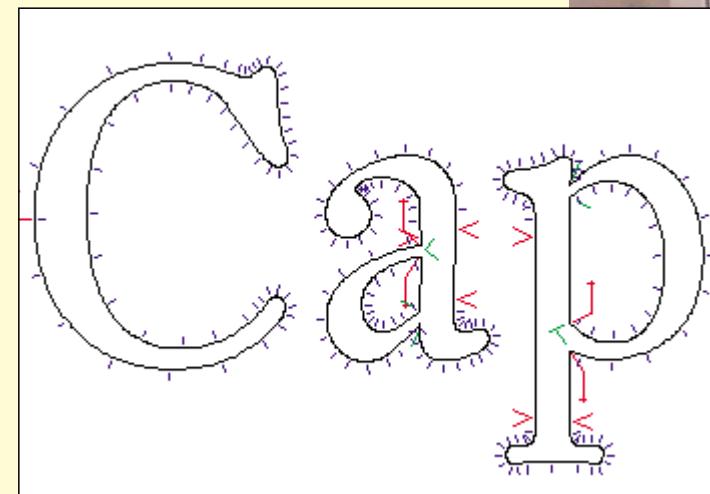


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TYPE AND TECHNOLOGY

DUTCH TYPE LIBRARY

IKARUS SYSTEM

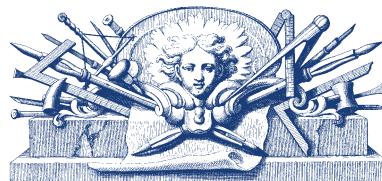
DTL FONTPRINTER

FM MODULAR STRUCTURE

FM DATA STRUCTURE

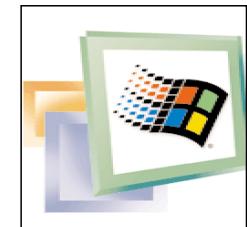
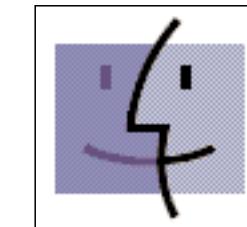
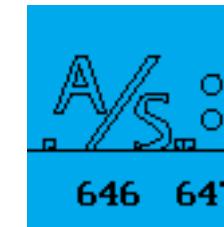
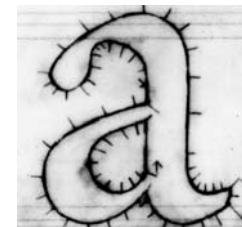
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• FM DEMONSTRATION



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Ikarus flavours over the last 30 years

General Automation (GA)

LSI, PDP-11 (DEC) / RSX

VAX (DEC) / VMS

SUN / Unix

Vax Station / vms

Sony NEWS / UNIX

Mac / os 6–9

PC / DOS

Ikarus v2

Ikarus v3

Ikarus v4

Ikarus v4

Ikarus v4

Ikarus v4

Ikarus M

Ikarus B



TYPE AND TECHNOLOGY

DUTCH TYPE LIBRARY

IKARUS SYSTEM

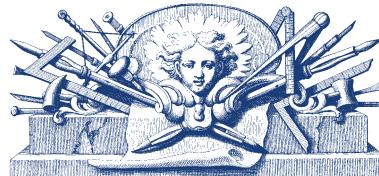
DTL FONTPROCESSOR

FM MODULAR STRUCTURE

FM DATA STRUCTURE

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Alphabet		
Messen		
Hilfslinien		
Marken		
Zoom +	Zoom -	
Grundzustand		
Selektion		
P	K	B
Funktionen		
Schnellmodus		
Rücknahme		
Digitalisieren		
Löschen		
Einfügen		
Schieben		
Kennung		
Kopieren		
Drehen		



TYPE AND TECHNOLOGY

DUTCH TYPE LIBRARY

IKARUS SYSTEM

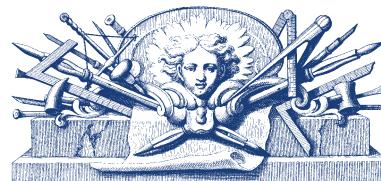
DTL FONTPRINTER

FM MODULAR STRUCTURE

FM DATA STRUCTURE

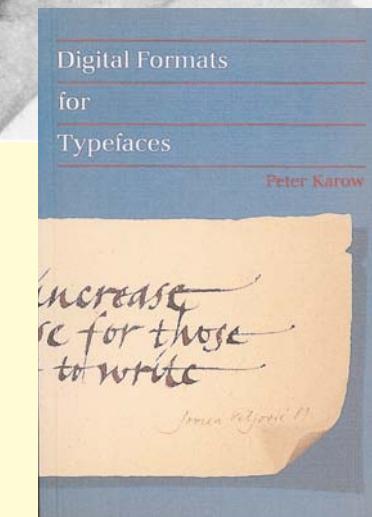
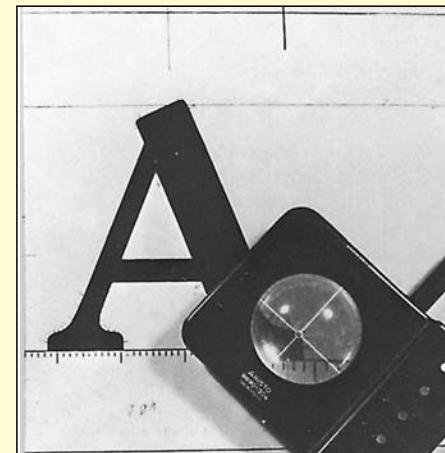
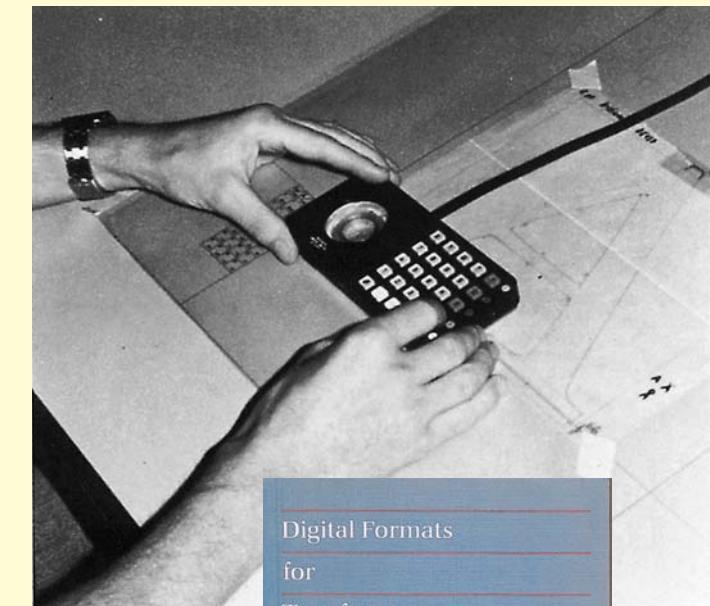
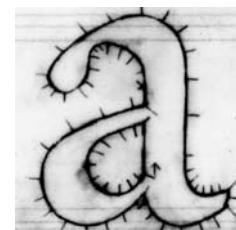
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• FM DEMONSTRATION



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TYPE AND TECHNOLOGY

DUTCH TYPE LIBRARY

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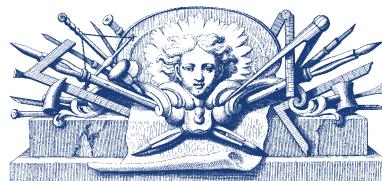
DTL FONTPROCESSOR

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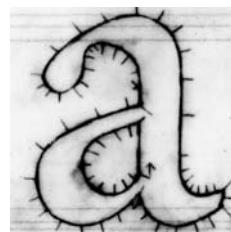
FM DATA STRUCTURE

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• FM DEMONSTRATION



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The Ikarus system

- The development started as early as 1976.
- Ikarus was the first professional font production system.
- The Ikarus format was the first industry standard for digital font data.
- Ikarus was the source for many inventions: hinting, interpolation, auto tracing and auto kerning.



TYPE AND TECHNOLOGY

DUTCH TYPE LIBRARY

IKARUS SYSTEM

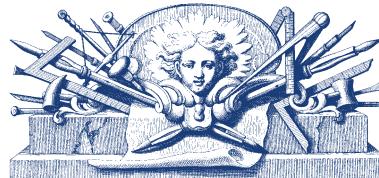
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FM MODULAR STRUCTURE

FM DATA STRUCTURE

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Font Disp Object Save Ps Previous Quit Edit L: 1185 IR: 44
 At: 2000 T: n0190031 C: 102 Background Swap Save Next End Modify W: E160 CH: 3
 R: 660 TOTW: 10005 YMIN: 0 YMAR: 10930

grid	pen	hico	conn
measure		guides	
guides h	guides v		
fg marks		fg numbers	
s	e	c	t
con	seq	res	
bg numbers			
con	seq	res	
win1	win2		
reset fill			
offset			
co			
ch			
undo			
insert			
smooth			
shift y			
quick on co			
sort co			
coiccor			
rotate			
scale			
merge			
set extrema			
digitize			
circle			
hidden Lines			
sidebearings			
2	3	4	

Win1: Object
 Arc: 2000 Typ: n0190031.ik

Win2: Interpolation Result



TYPE AND TECHNOLOGY

DUTCH TYPE LIBRARY

IKARUS SYSTEM

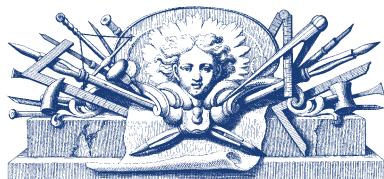
DTL FONTMASTER

FM MODULAR STRUCTURE

FM DATA STRUCTURE

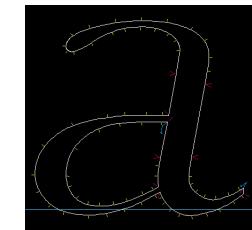
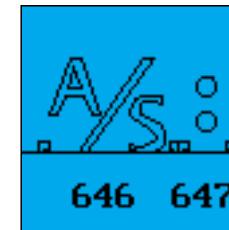
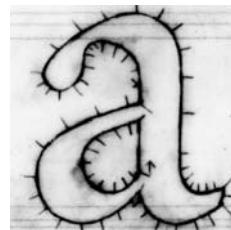
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DTL ALBERTINA

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TYPE AND TECHNOLOGY

DUTCH TYPE LIBRARY

IKARUS SYSTEM

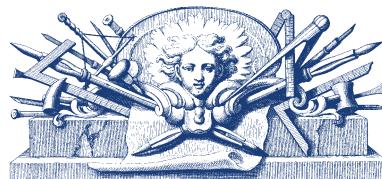
DTL FONTMASTER

FM MODULAR STRUCTURE

FM DATA STRUCTURE

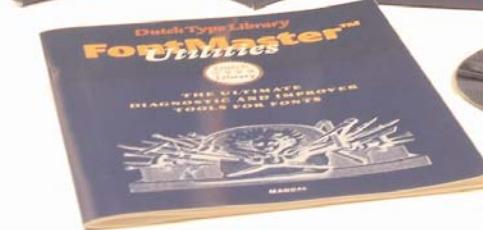
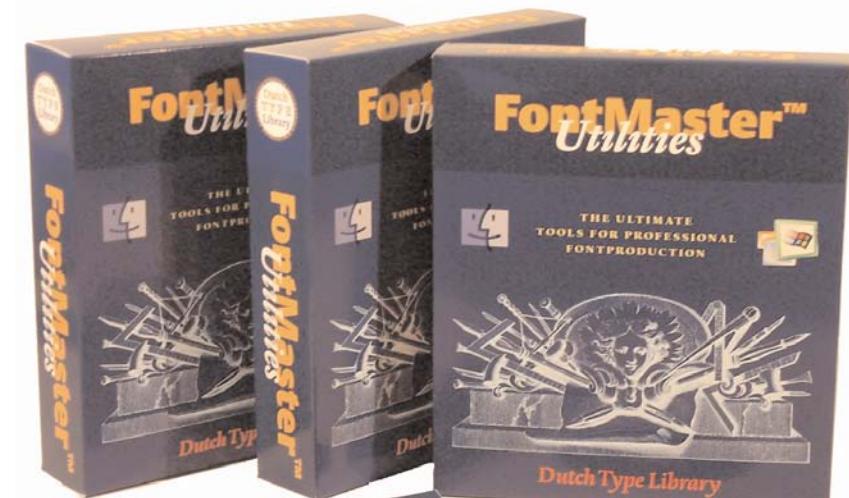
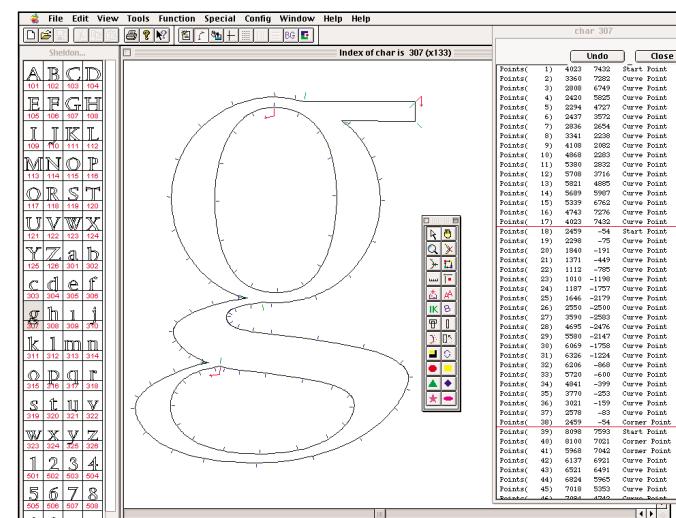
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TYPE AND TECHNOLOGY

DUTCH TYPE LIBRARY

IKARUS SYSTEM

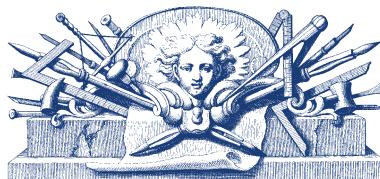
DTL FONTPROCESSOR

FM MODULAR STRUCTURE

FM DATA STRUCTURE

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DTL FontMaster features

- Data base structure (Glyph).
- Batch oriented, no scripting needed.
- Easy to generate and edit command files.
- Modular structure (7 modules available).
- Up to 65.000 glyphs in one data base file.
- Platform independent data formats.
- Runs under Mac os and Windows.
- Easy to handle interface.



TYPE AND TECHNOLOGY

DUTCH TYPE LIBRARY

IKARUS SYSTEM

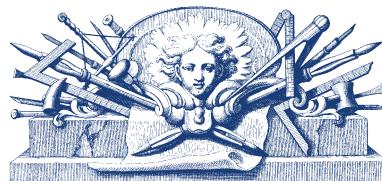
DTL FONTPRINTER

FM MODULAR STRUCTURE

FM DATA STRUCTURE

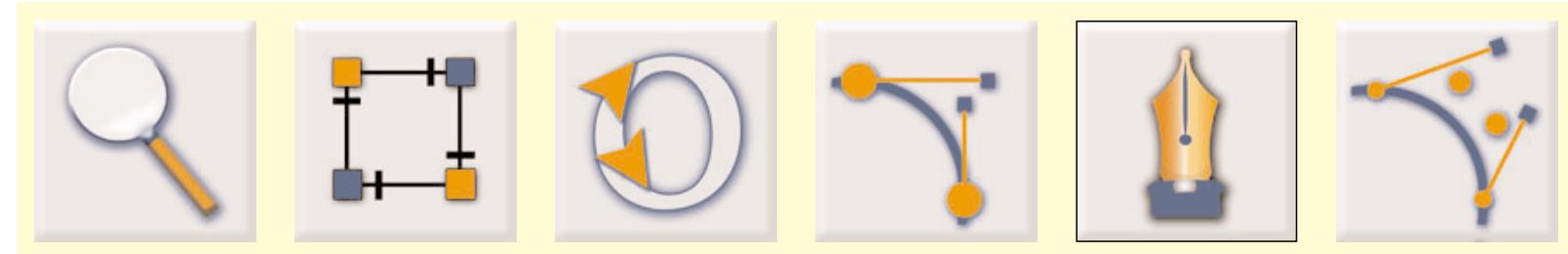
FM FUTURE DEVELOPMENT

• FM DEMONSTRATION



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302	303	304	305
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TYPE AND TECHNOLOGY

DUTCH TYPE LIBRARY

IKARUS SYSTEM

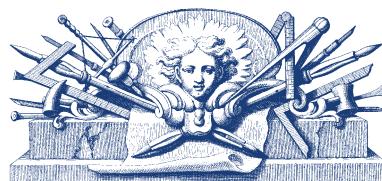
DTL FONTPMASTER

FM MODULAR STRUCTURE

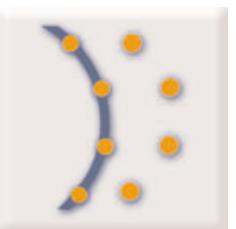
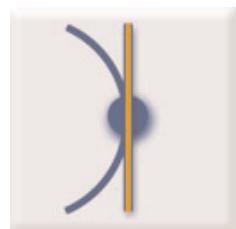
FM DATA STRUCTURE

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DTL FontMaster functionality

- Data Management (merge, delete, copy).
- Batch functions (merge composites, replace base characters, all kind of metrics stuff).
- Extensive editing functionality for the Bezier and IK formats.
- Digitizer Interface for manual digitizing.
- Auto tracing and auto kerning.
- Automatic OT features generation.



TYPE AND TECHNOLOGY

DUTCH TYPE LIBRARY

IKARUS SYSTEM

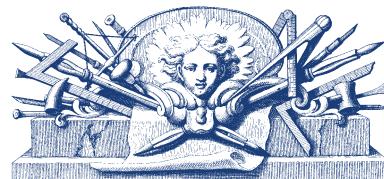
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FOMA



BEMA



BLMA



COMA



DAMA



IKMA



The modular structure of FM

1. *Design stage*

- Sketching/drawing on paper, resulting in manual digitizing (IkarusMaster) and/or auto tracing (TraceMaster).
- Sketching/drawing on screen, directly in a font/glyph editor (BezierMaster/IkarusMaster) or using a program like Adobe Illustrator in between.



TYPE AND TECHNOLOGY

DUTCH TYPE LIBRARY

IKARUS SYSTEM

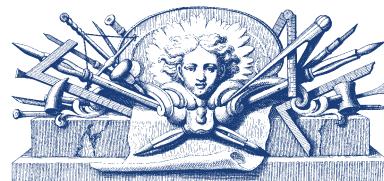
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FM DATA STRUCTURE

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The modular structure of FM

2. *Editing stage*

- Enhancing (aesthetically and technically) of the design (BezierMaster/IkarusMaster).
- Enhancing of the glyph set, from basic character set to multiple code page support (BezierMaster/IkarusMaster).
- Spacing (BezierMaster/IkarusMaster).
- Kerning (KernMaster/BezierMaster/



TYPE AND TECHNOLOGY

DUTCH TYPE LIBRARY

IKARUS SYSTEM

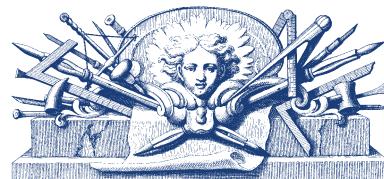
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The modular structure of FM

3. *Data management stage*

- Database building/enhancing/merging (BezierMaster/IkarusMaster).
- Consistency checking (ContourMaster).
- Technical quality control (ContourMaster).

4. *Font generation stage*

- Producing different formats for different platforms (DataMaster).



TYPE AND TECHNOLOGY

DUTCH TYPE LIBRARY

IKARUS SYSTEM

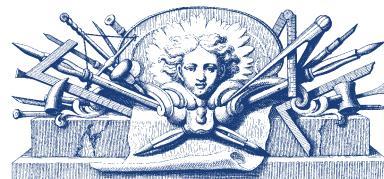
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The modular structure of FM

5. Format enhancement stage

- Delta hinting (vTT).
- Adding OT features (DataMaster/vOLT).

**Numbers 1–4: Long term technology,
resulting in a glyph set wherefrom different
font formats can be generated.**

**Number 5: Short term technology, meant to
adapt font data to reproduction technology.**



TYPE AND TECHNOLOGY

DUTCH TYPE LIBRARY

IKARUS SYSTEM

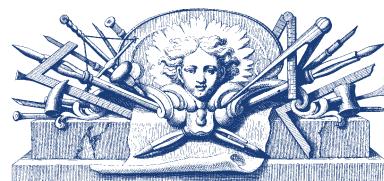
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The data structure of FM

A versatile system for batch production:

- *Glyph database (platform independent).*
- *Character Layout file*
(character naming/encoding).
- *UFM file (font naming).*
- *AFM/kernfea file (kerning information).*



TYPE AND TECHNOLOGY

DUTCH TYPE LIBRARY

IKARUS SYSTEM

DTL FONTPROCESSOR

FM MODULAR STRUCTURE

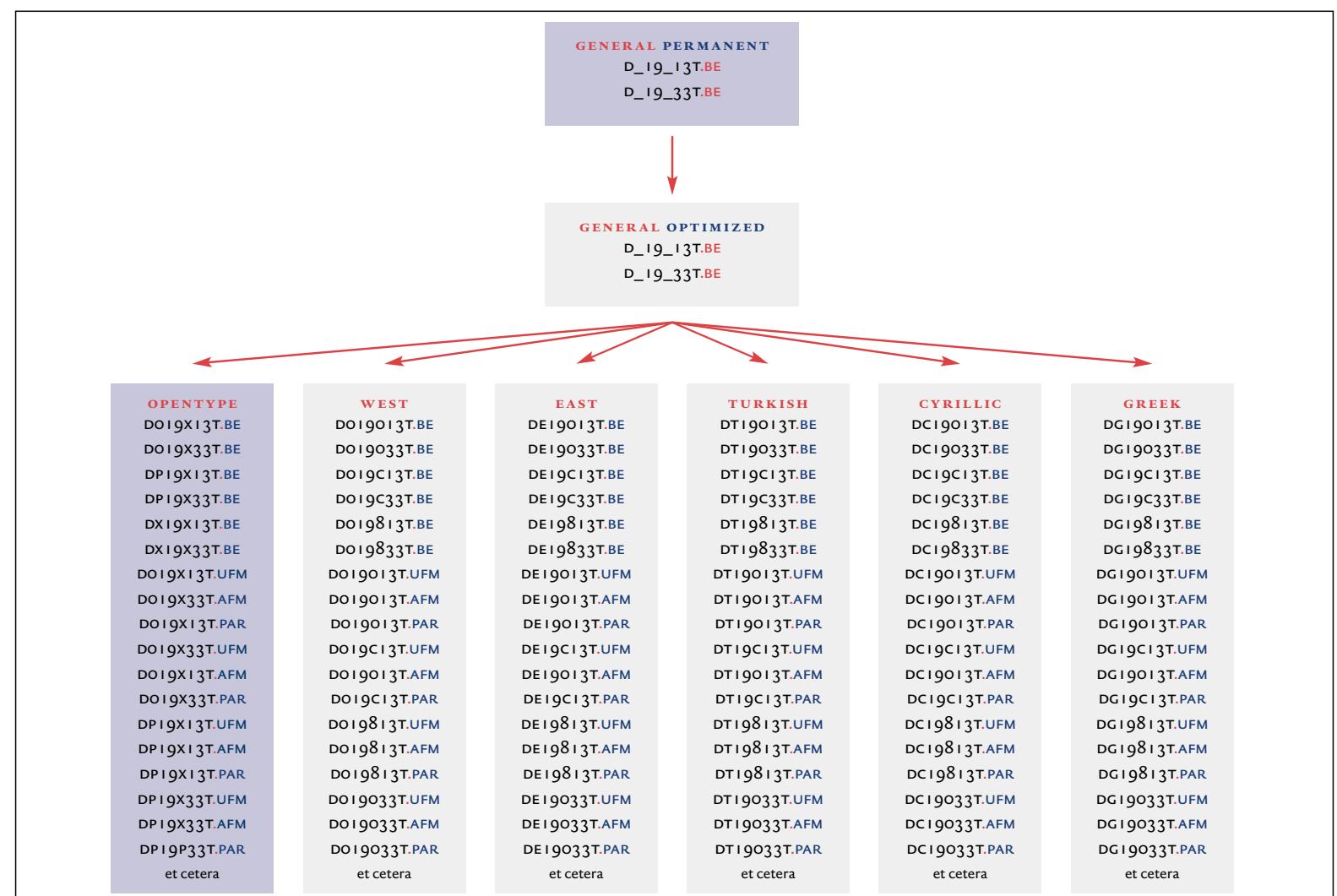
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FontMaster™ Utilities





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IKARUS SYSTEM

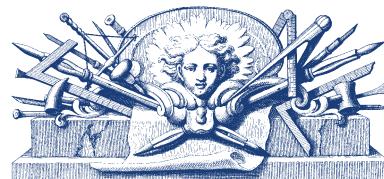
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Conditions for auto generating OT features

- The glyph(s) must be in the database.
- The character(s) must be listed in the Character Layout file (.cha).
- The character(s) must be identically listed in the Features file and .cha file.



TYPE AND TECHNOLOGY

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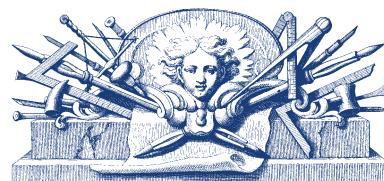
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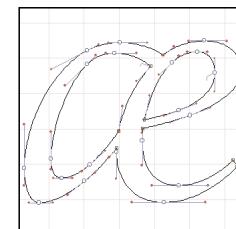
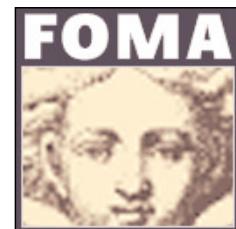
Future development of FM

- Enhanced OpenType features generation.
- Enhanced batch functionality.
- Enhanced command file support.
- Mac os x native version.

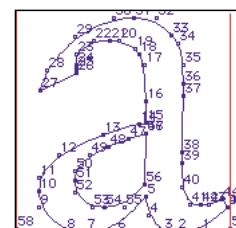
and much more...



TYPE AND TECHNOLOGY



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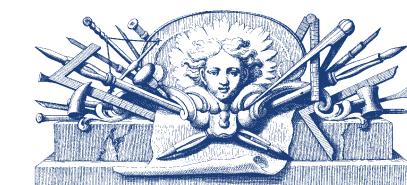
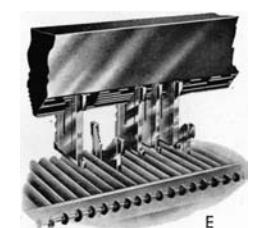
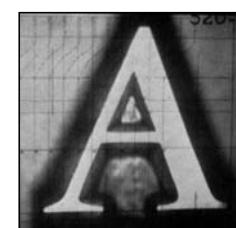
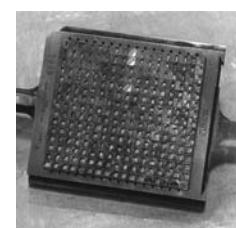


FM MODULAR STRUCTURE

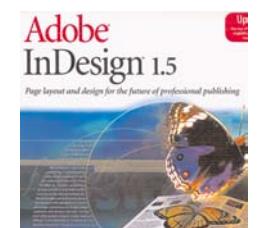
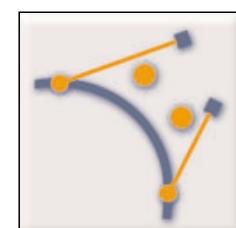
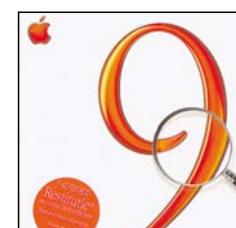


FM DATA STRUCTURE

FM FUTURE DEVELOPMENT



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