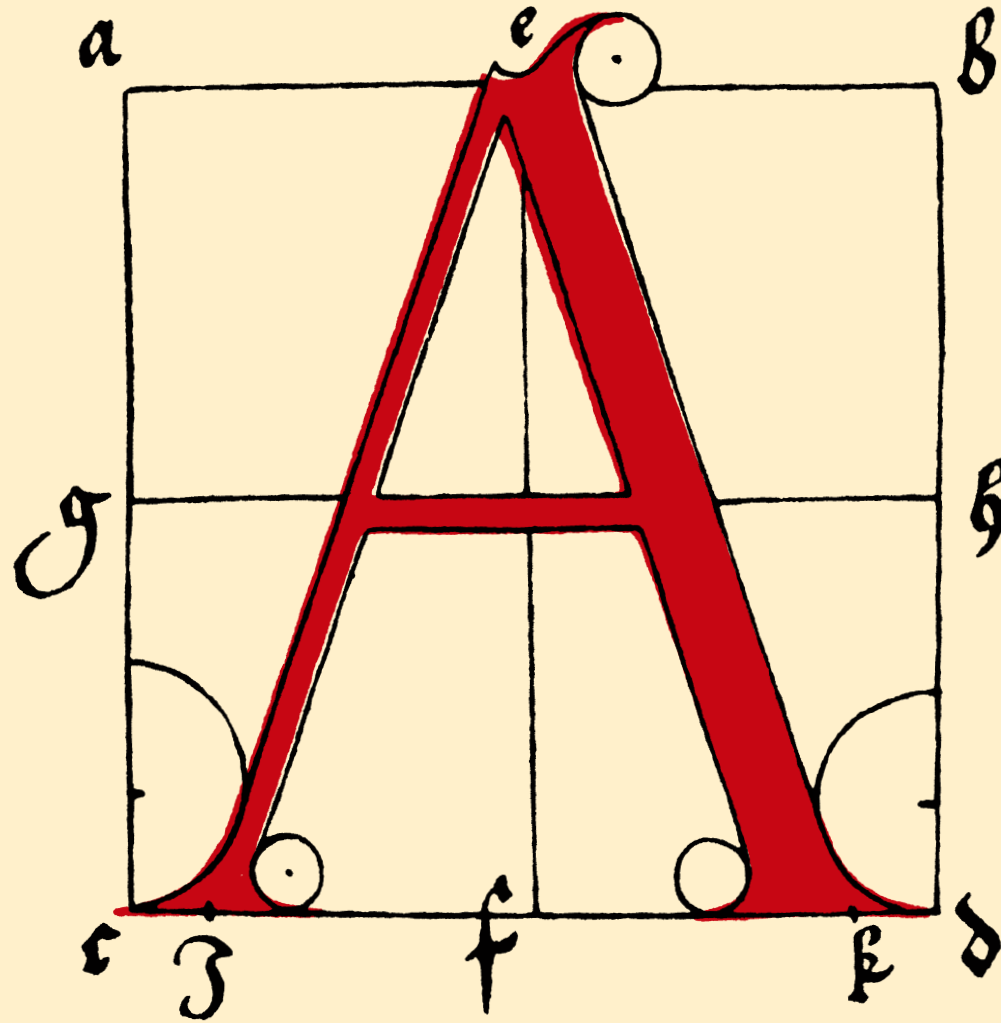
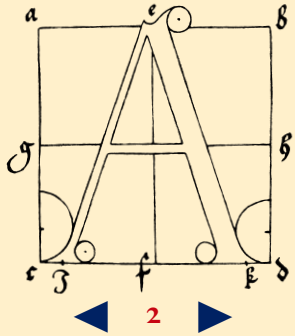


- ▶ IKARUS and FM
- ▶ Research
- ▶ Systems
- ▶ Legibility
- ▶ Music
- ▶ Parameterizing
- ▶ Idiom
- ▶ Other scripts





## Automating Type Design Processes

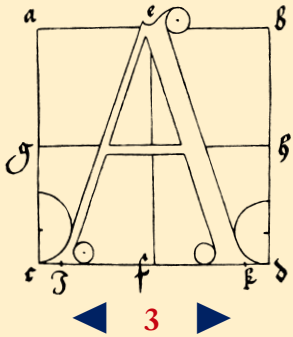
- ▶ IKARUS and FM
- ▶ Research
- ▶ Systems
- ▶ Legibility
- ▶ Music
- ▶ Parameterizing
- ▶ Idiom
- ▶ Other scripts

*‘Instead of imagining that our main task is to instruct a computer what to do, let us concentrate rather on explaining to human beings what we want a computer to do.’*

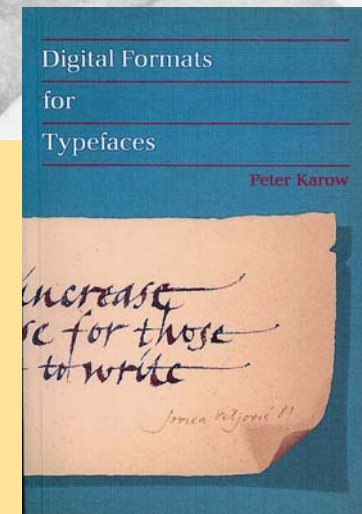
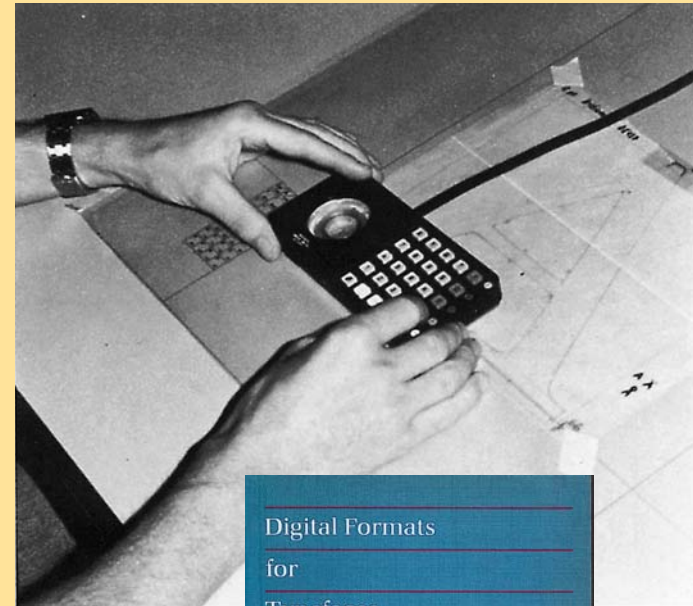
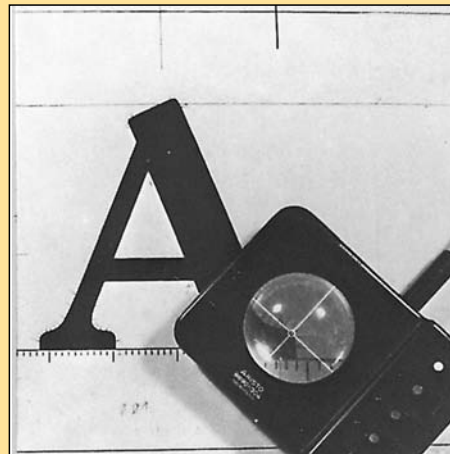
Donald Knuth

## AUTOMATING TYPE DESIGN PROCESSES

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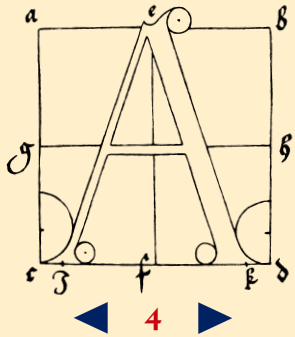
- ▶ IKARUS and FM
- ▶ Research
- ▶ Systems
- ▶ Legibility
- ▶ Music
- ▶ Parameterizing
- ▶ Idiom
- ▶ Other scripts



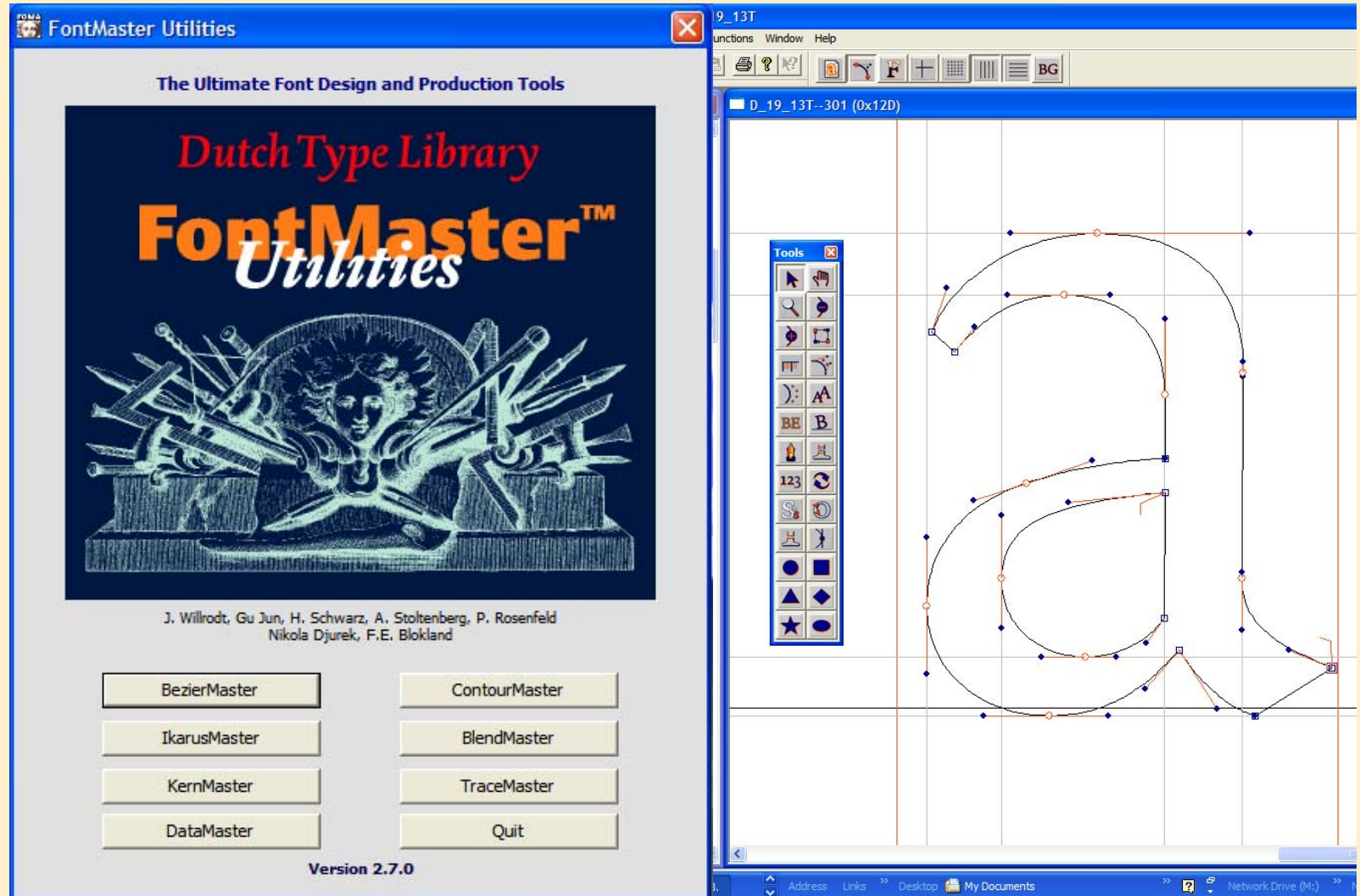
STEIGENBERGER KURHAUS HOTEL, THE HAGUE 18 NOVEMBER 2009

**AUTOMATING TYPE DESIGN PROCESSES**

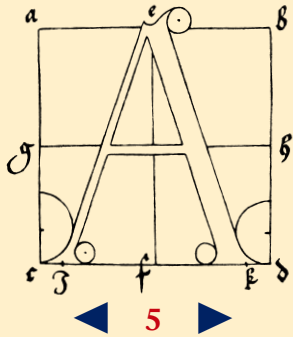
© FRANK E. BLOKLAND, MMIX



- ▶ IKARUS and FM
- ▶ Research
- ▶ Systems
- ▶ Legibility
- ▶ Music
- ▶ Parameterizing
- ▶ Idiom
- ▶ Other scripts



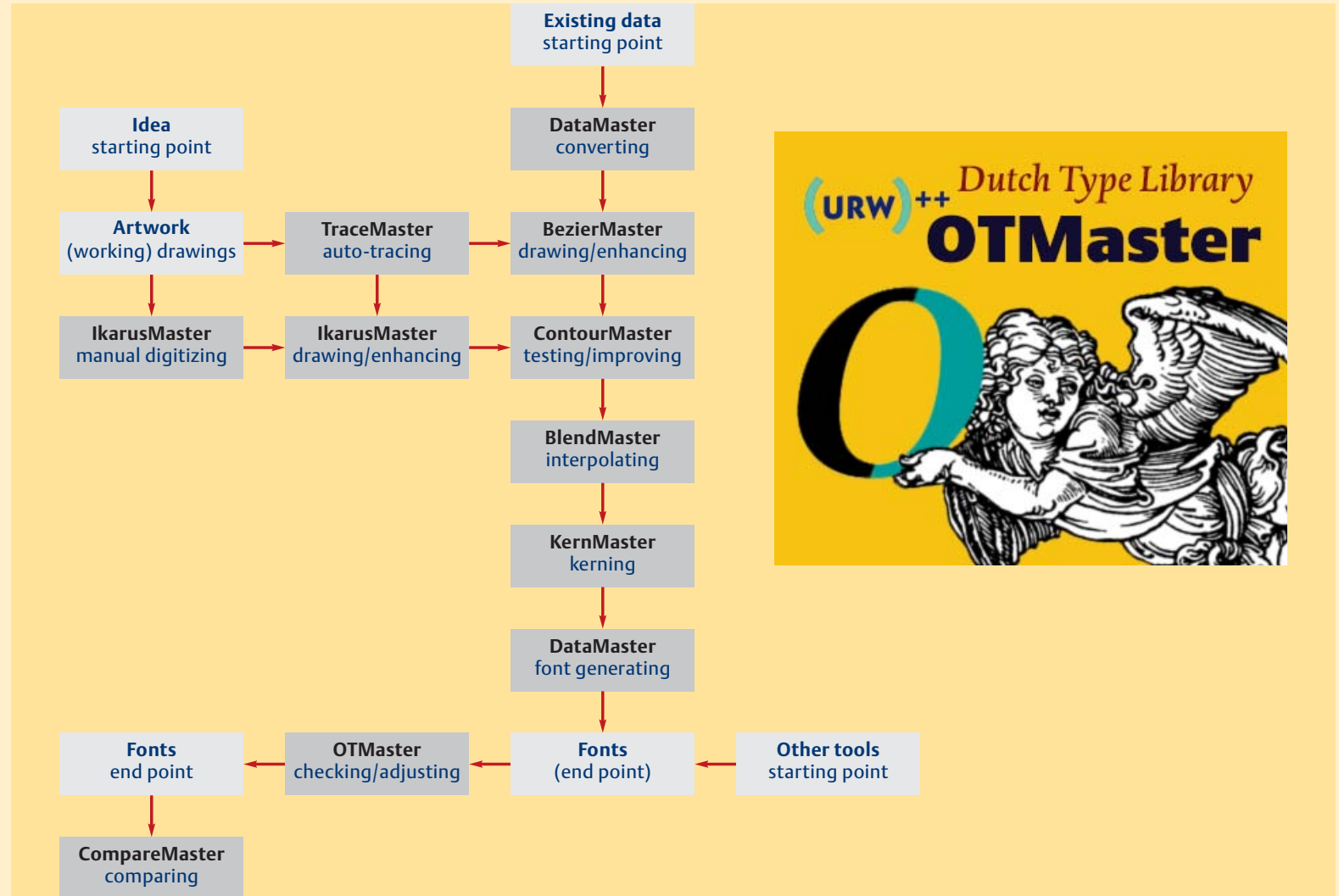
**STEIGENBERGER KURHAUS HOTEL, THE HAGUE 18 NOVEMBER 2009**

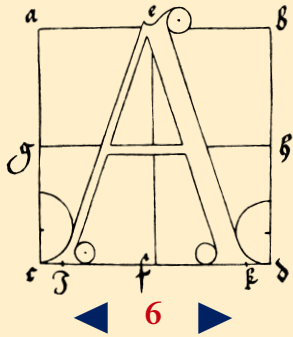


**AUTOMATING TYPE DESIGN PROCESSES**

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- ▶ **IKARUS and FM**
- ▶ **Research**
- ▶ **Systems**
- ▶ **Legibility**
- ▶ **Music**
- ▶ **Parameterizing**
- ▶ **Idiom**
- ▶ **Other scripts**

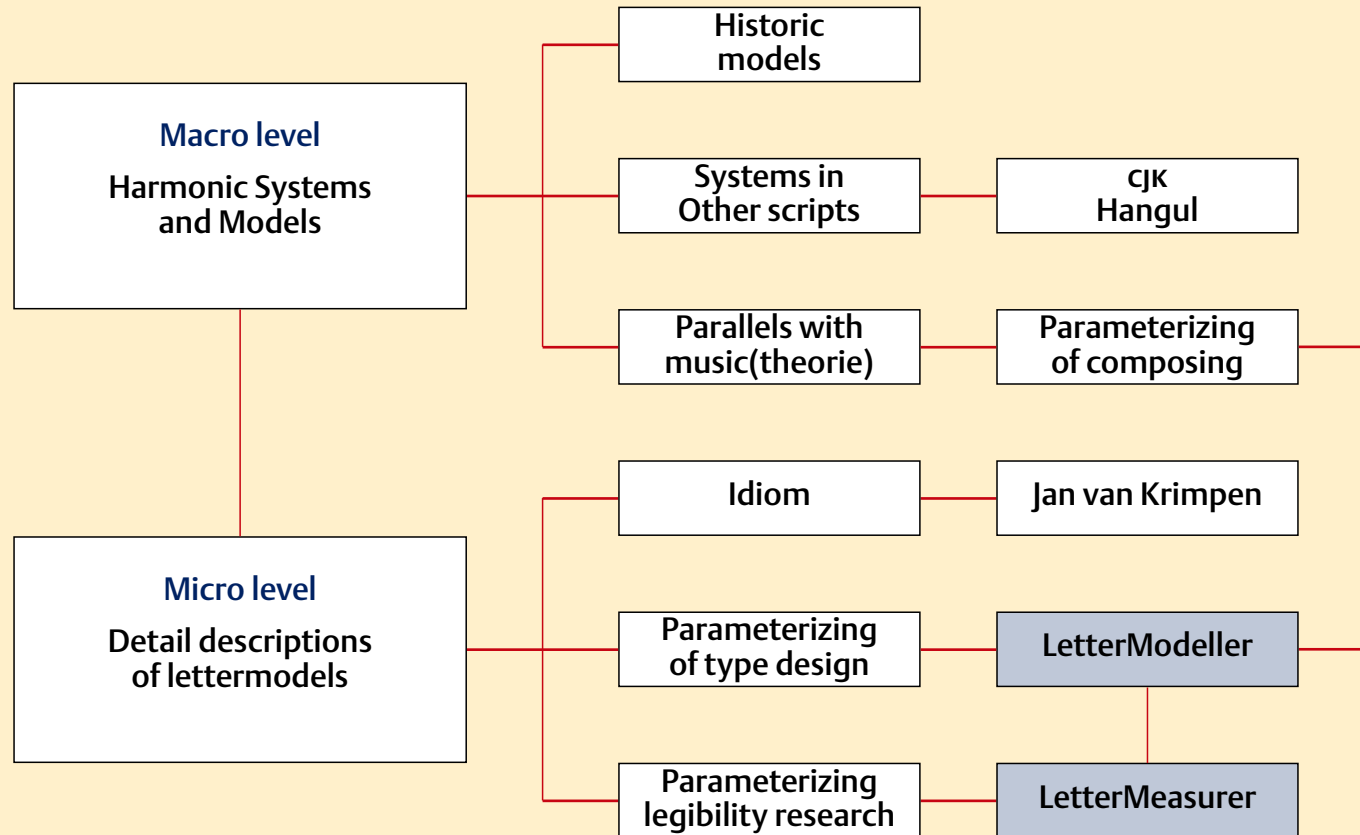


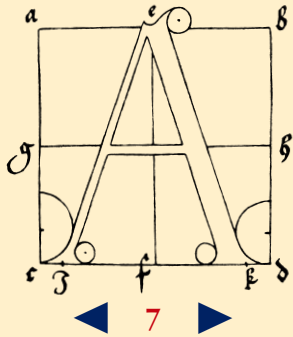


Main part

Appendix

- ▶ IKARUS and FM
- ▶ Research
- ▶ Systems
- ▶ Legibility
- ▶ Music
- ▶ Parameterizing
- ▶ Idiom
- ▶ Other scripts



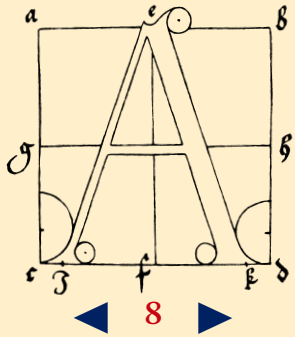


- ▶ IKARUS and FM
- ▶ Research
- ▶ Systems
- ▶ Legibility
- ▶ Music
- ▶ Parameterizing
- ▶ Idiom
- ▶ Other scripts

## AUTOMATING TYPE DESIGN PROCESSES

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- ▶ IKARUS and FM
- ▶ Research
- ▶ Systems
- ▶ Legibility
- ▶ Music
- ▶ Parameterizing
- ▶ Idiom
- ▶ Other scripts

1. Gerrit Noordzij  
also: construction sort  
supposed to be coherent

Capital  
form sort<sup>1</sup>

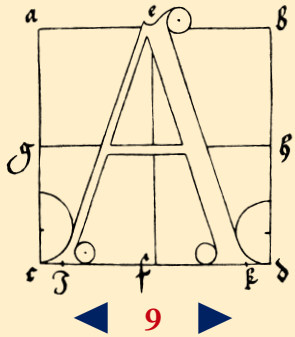
Roman  
form sort

Cursive  
form sort

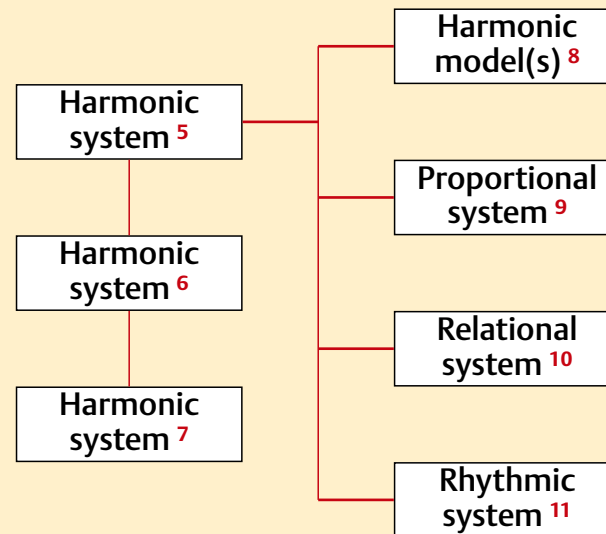


## AUTOMATING TYPE DESIGN PROCESSES

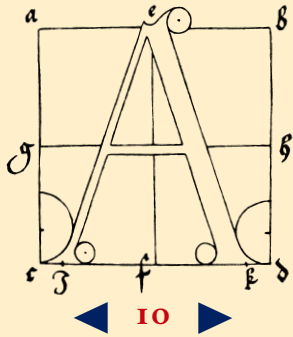
© FRANK E. BLOKLAND, MMIX



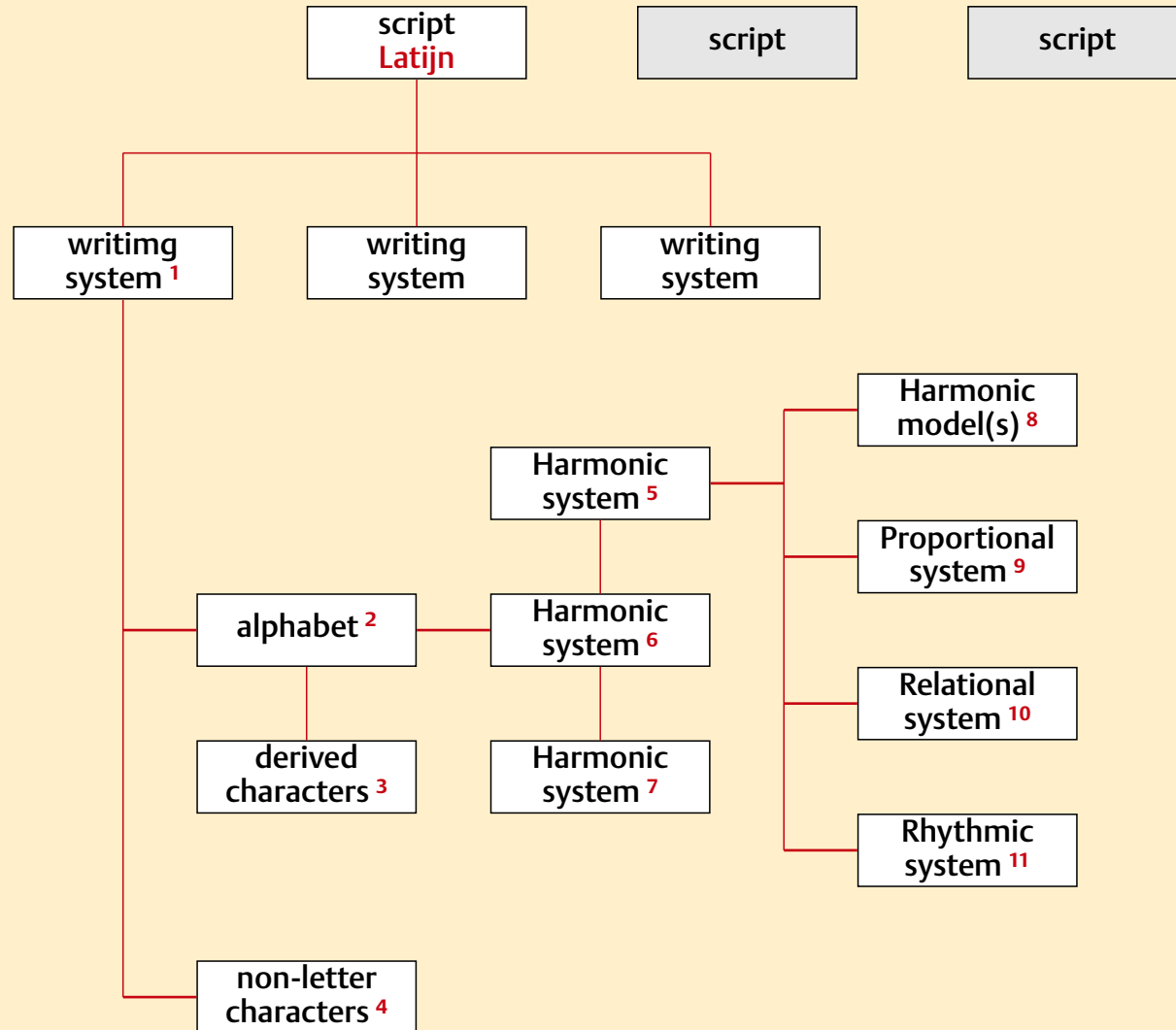
- ▶ IKARUS and FM
- ▶ Research
- ▶ Systems
- ▶ Legibility
- ▶ Music
- ▶ Parameterizing
- ▶ Idiom
- ▶ Other scripts



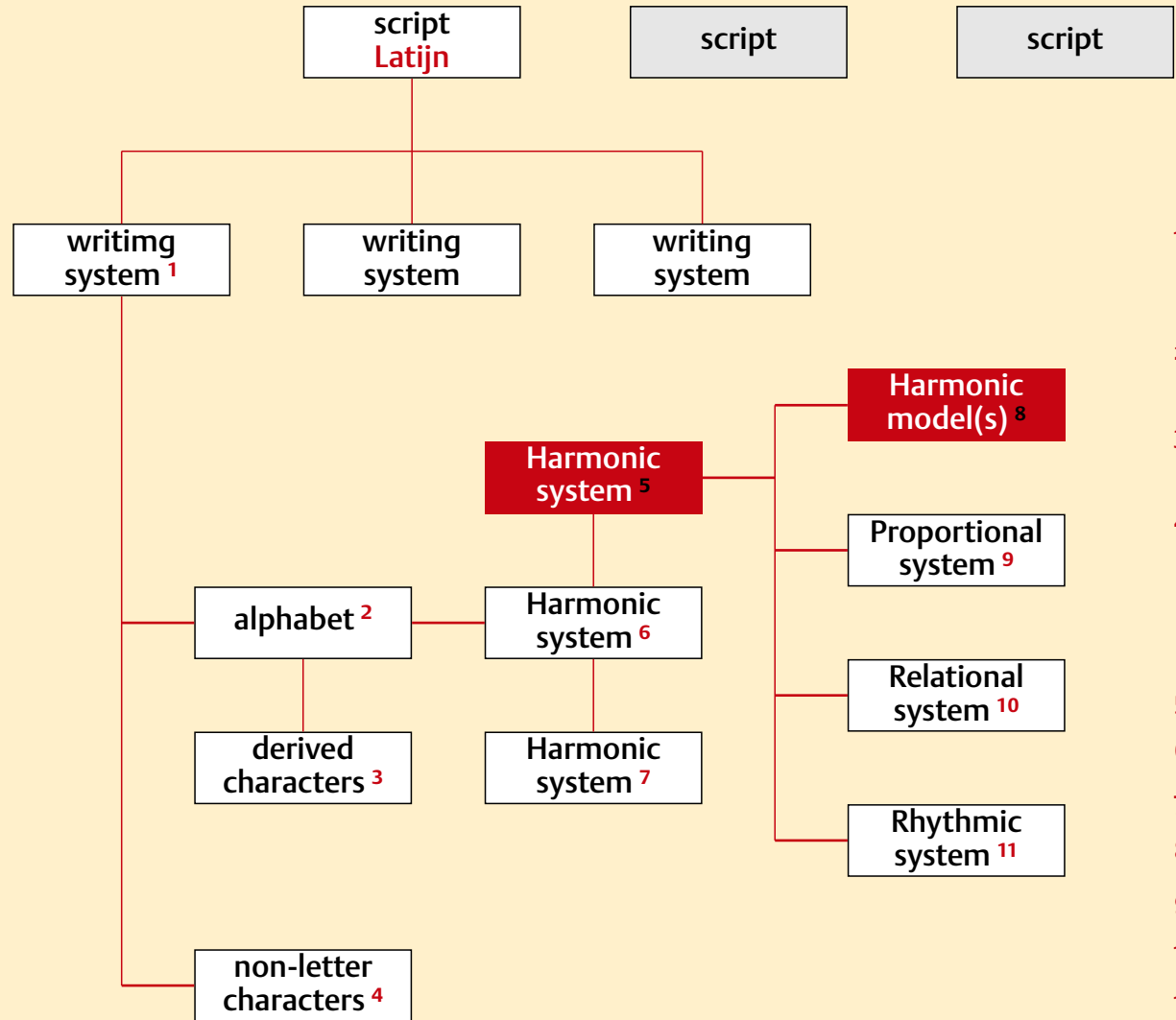
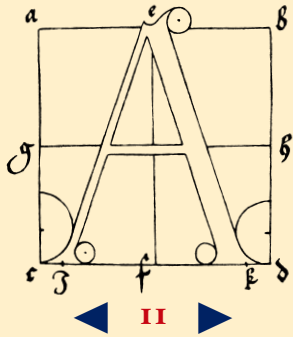
- 5. Capital
- 6. Roman/Textletter
- 7. Cursive
- 8. Construction(s) -relation
- 9. Pen width/character width
- 10. Pen width/x-height/contrast
- 11. Letters and spacing



- ▶ IKARUS and FM
- ▶ Research
- ▶ Systems
- ▶ Legibility
- ▶ Music
- ▶ Parameterizing
- ▶ Idiom
- ▶ Other scripts



1. Orthographic term for language rules  
Typography: character set
2. Set consisting of basic vowels and consonants
3. For example with diacritics or syllables
4. For example figures and punctuation marks (figures can be shared between writing systems and even between scripts)
5. Capital
6. Roman/Textletter
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10. Pen width/x-height/contrast
11. Letters and spacing

▶ IKARUS and FM

▶ Research

▼ Systems

Harmonic model

Proportional

Relational

Rhythmic

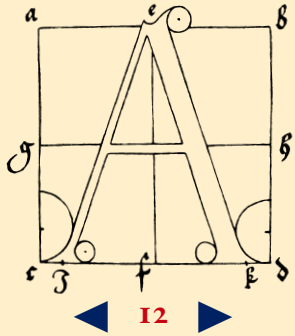
▶ Legibility

▶ Music

▶ Parameterizing

▶ Idiom

▶ Other scripts



▶ IKARUS and FM

▶ Research

▼ Systems

Harmonic model

Proportional

Relational

Rhythmic

▶ Legibility

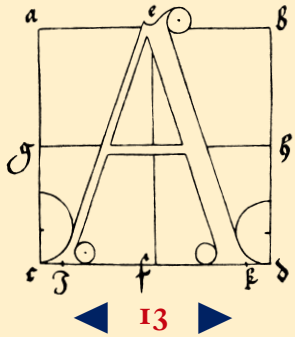
▶ Music

▶ Parameterizing

▶ Idiom

▶ Other scripts





▶ IKARUS and FM

▶ Research

▼ Systems

Harmonic model

Proportional

Relational

Rhythmic

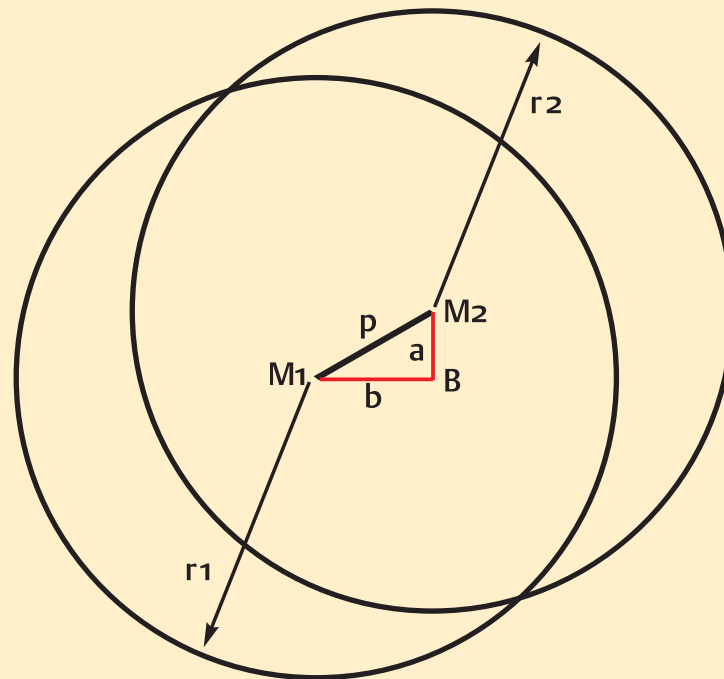
▶ Legibility

▶ Music

▶ Parameterizing

▶ Idiom

▶ Other scripts



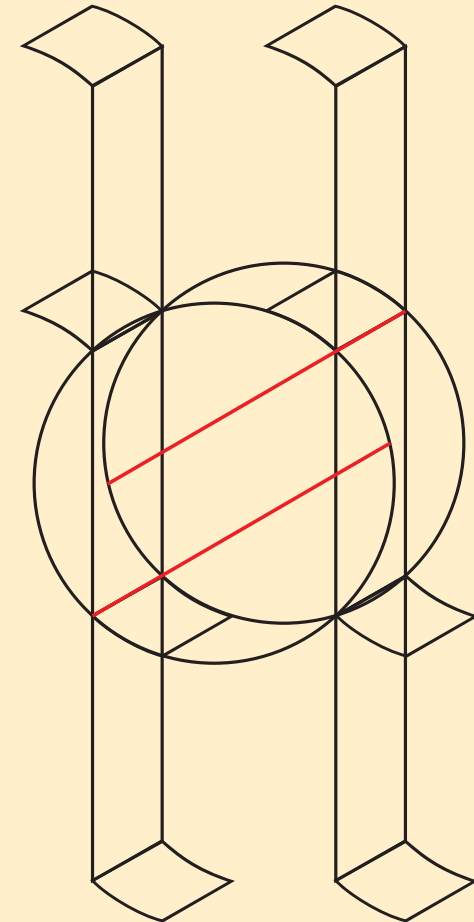
In case of translation over 30 degrees:

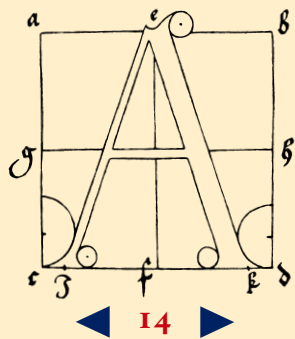
$$M_1 - M_2 = p \text{ (pen nib)}$$

$$M_1 - B = b \text{ (stem width)} = p \cdot \sin 60^\circ (0,87 p)$$

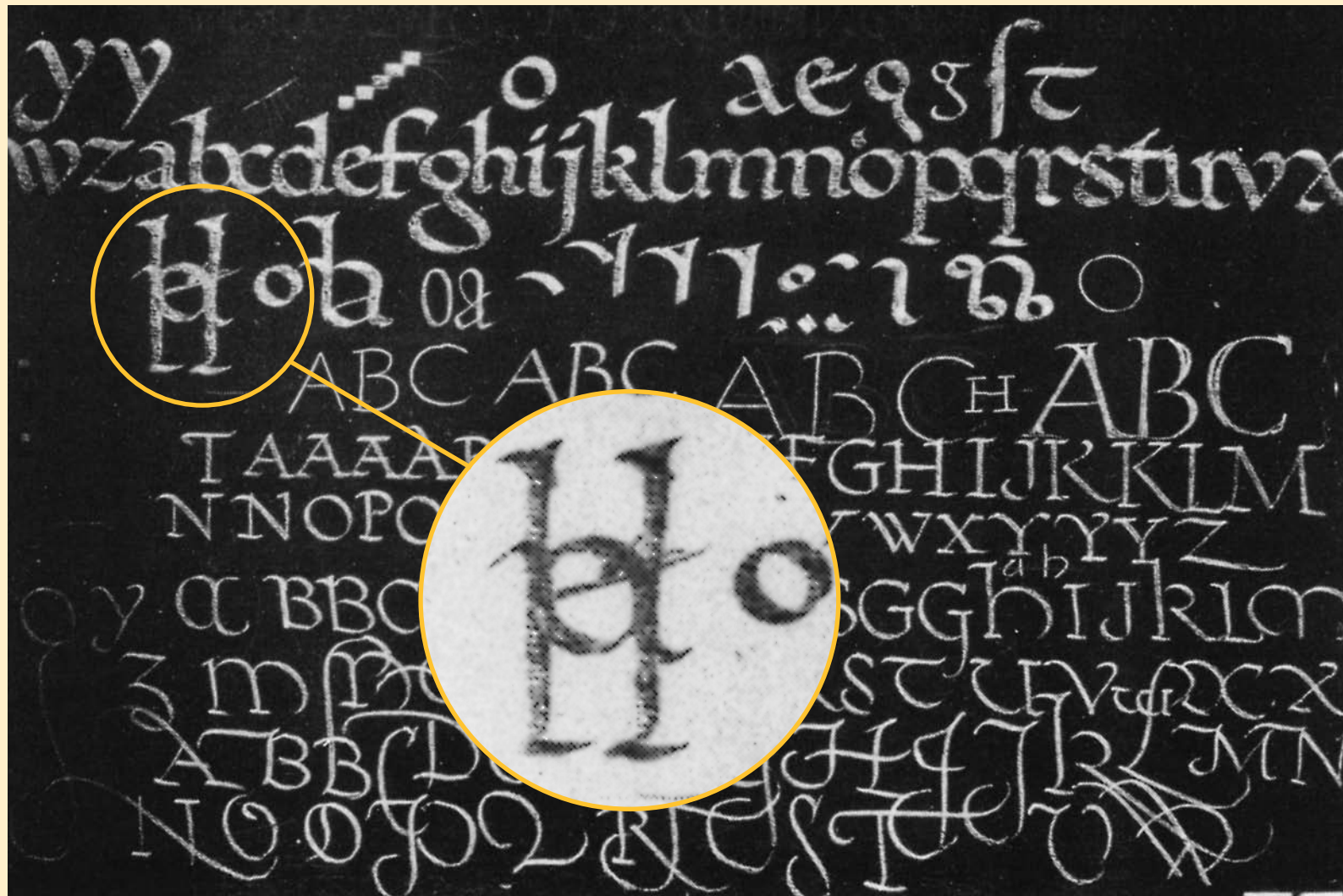
$$M_2 - B = a = p \cdot \sin 30^\circ (0,5 p)$$

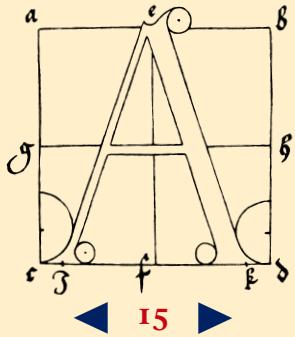
$$r_1 = r_2 = \text{radius}$$





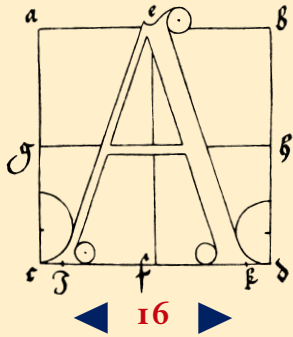
- ▶ IKARUS and FM
- ▶ Research
- ▼ Systems
  - Harmonic model
  - Proportional
  - Relational
  - Rhythmic
- ▶ Legibility
- ▶ Music
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- ▶ IKARUS and FM
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- ▶ Legibility
- ▶ Music
- ▶ Parameterizing
- ▶ Idiom
- ▶ Other scripts





▶ IKARUS and FM

▶ Research

▼ Systems

Harmonic model

Proportional

Relational

Rhythmic

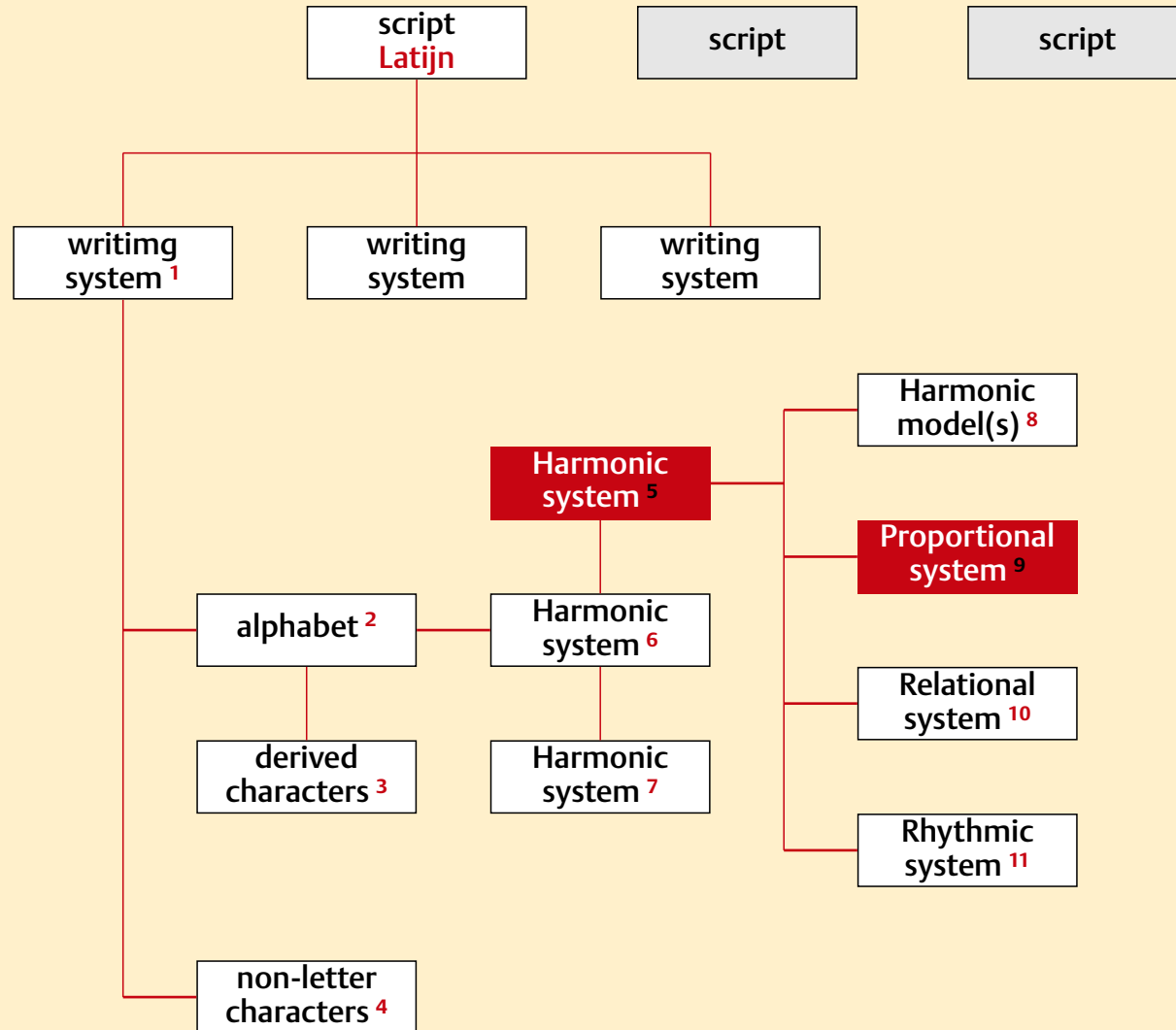
▶ Legibility

▶ Music

▶ Parameterizing

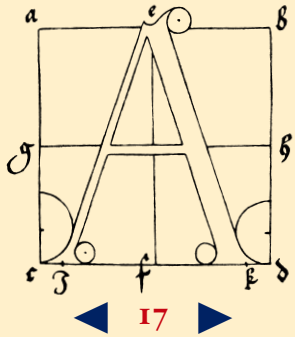
▶ Idiom

▶ Other scripts



1. Orthographic term for language rules  
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8. Construction(s) -relation
9. Pen width/character width
10. Pen width/x-height/contrast
11. Letters and spacing





▶ IKARUS and FM

▶ Research

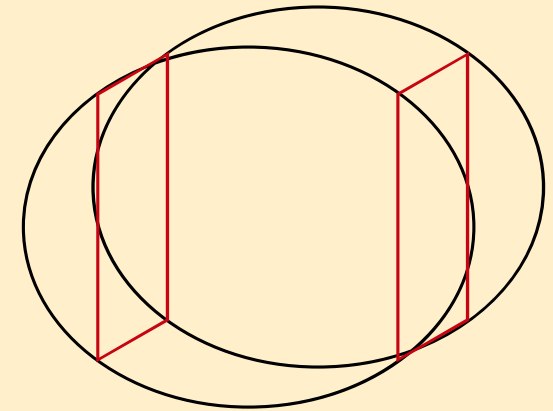
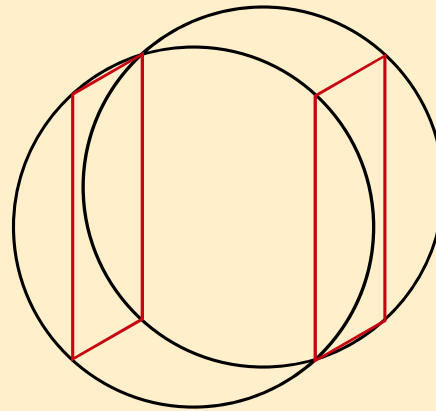
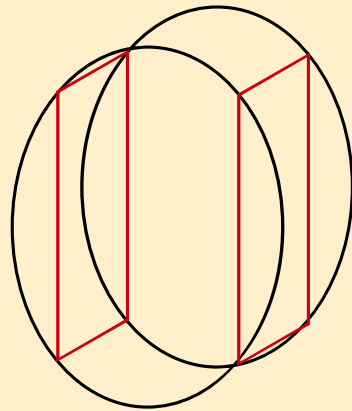
▼ Systems

Harmonic model

Proportional

Relational

Rhythmic



▶ Legibility

▶ Music

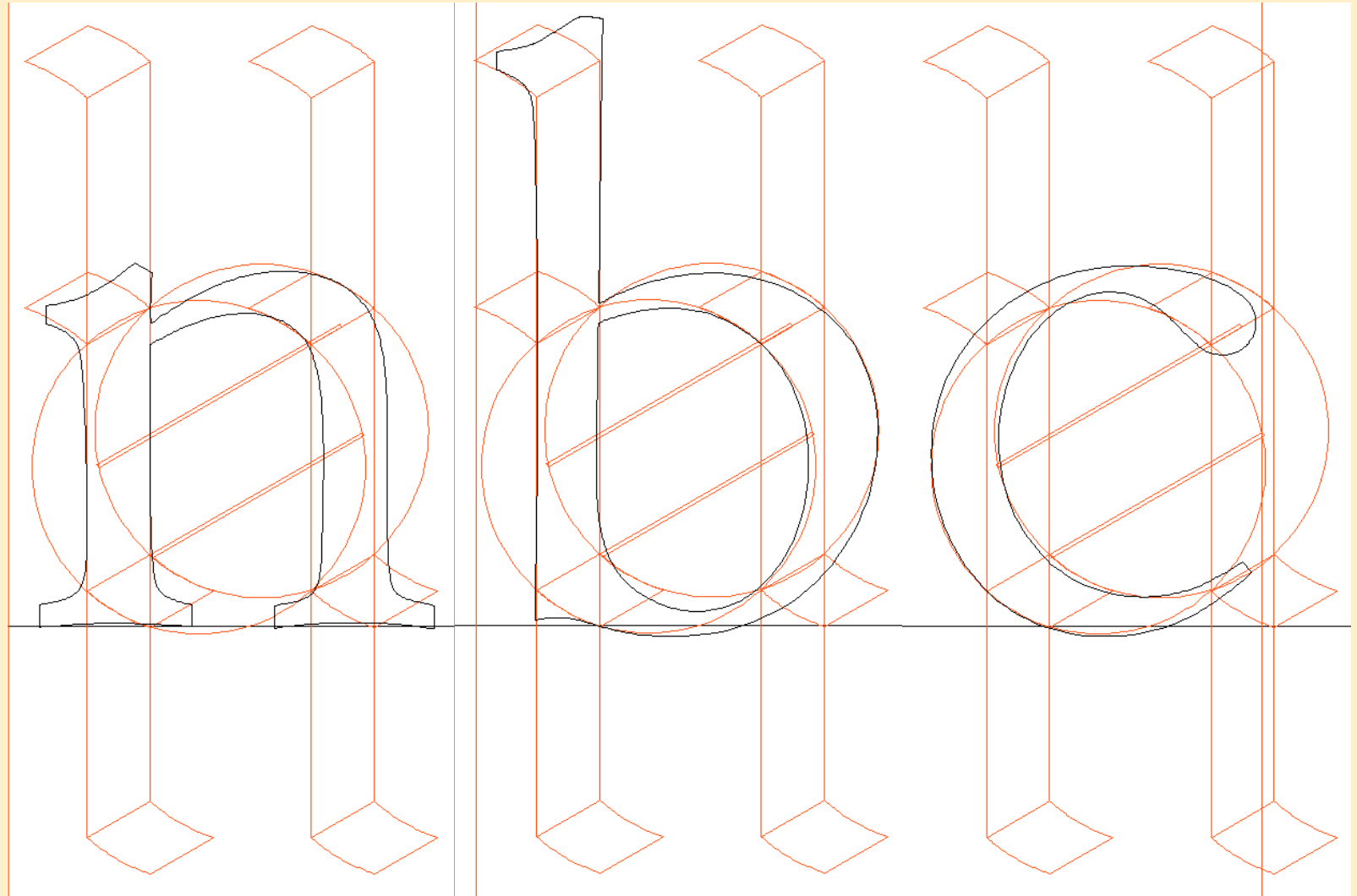
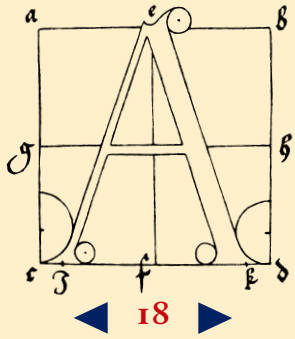
▶ Parameterizing

▶ Idiom

▶ Other scripts

**AUTOMATING TYPE DESIGN PROCESSES**

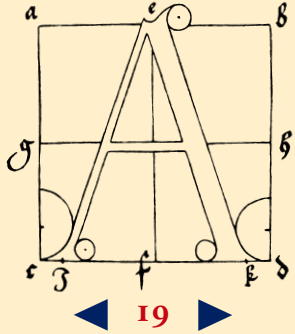
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- ▶ IKARUS and FM
- ▶ Research
- ▼ Systems
  - Harmonic model
  - Proportional
  - Relational
  - Rhythmic
- ▶ Legibility
- ▶ Music
- ▶ Parameterizing
- ▶ Idiom
- ▶ Other scripts

**AUTOMATING TYPE DESIGN PROCESSES**

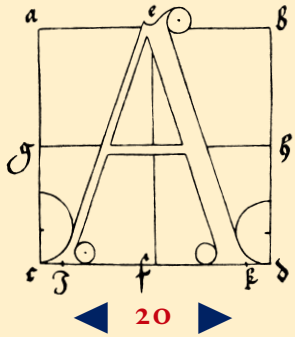
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- ▶ IKARUS and FM
- ▶ Research
- ▼ Systems
  - Harmonic model
  - Proportional
  - Relational
  - Rhythmic
- ▶ Legibility
- ▶ Music
- ▶ Parameterizing
- ▶ Idiom
- ▶ Other scripts

Parameters  
**Times New Roman: b**

- Pen width (mm): 10 / relatif 1
- Pen thickness (mm): 1.0
- Pen angle (degrees): 30.0
- X-height (mm): 50 / relatif 5
- Ascender (mm): 28.38 / relatif 2.8
- Descender (mm): 22.7 / relatif 2.3
- Stretch factor: 90%



▶ IKARUS and FM

▶ Research

▼ Systems

Harmonic model

Proportional

Relational

Rhythmic

▶ Legibility

▶ Music

▶ Parameterizing

▶ Idiom

▶ Other scripts

Parameters

Times New Roman: n

Pen width (mm): 10 / relatief 1

Pen thickness (mm): 1.0

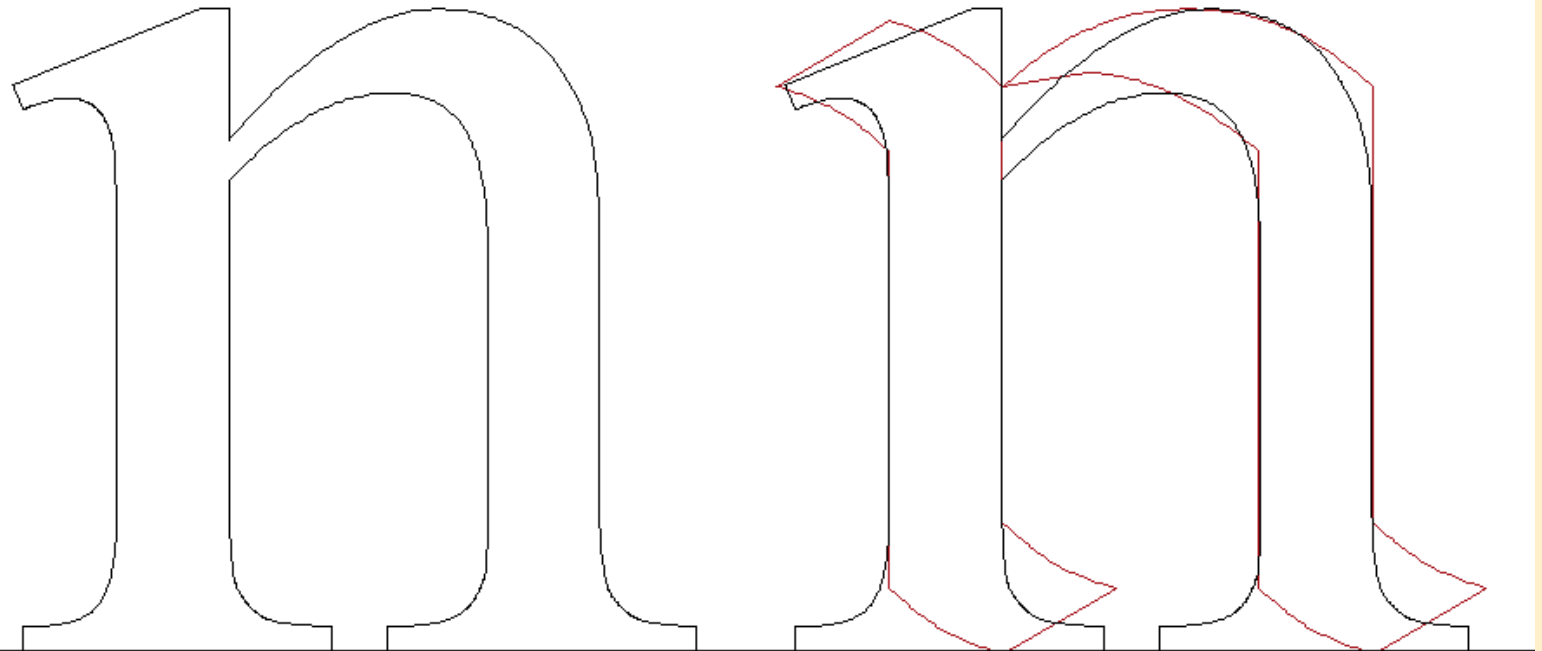
Pen angle (degrees): 30.0

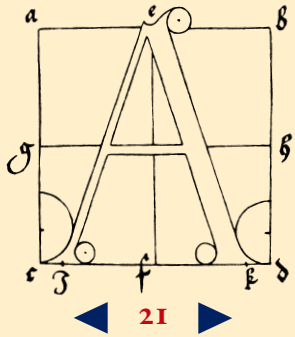
X-height (mm): 50 / relatief 5

Ascender (mm): 28.38 / relatief 2.8

Descender (mm): 22.7 / relatief 2.3

Stretch factor: 94%





▶ IKARUS and FM

▶ Research

▼ Systems

Harmonic model

Proportional

Relational

Rhythmic

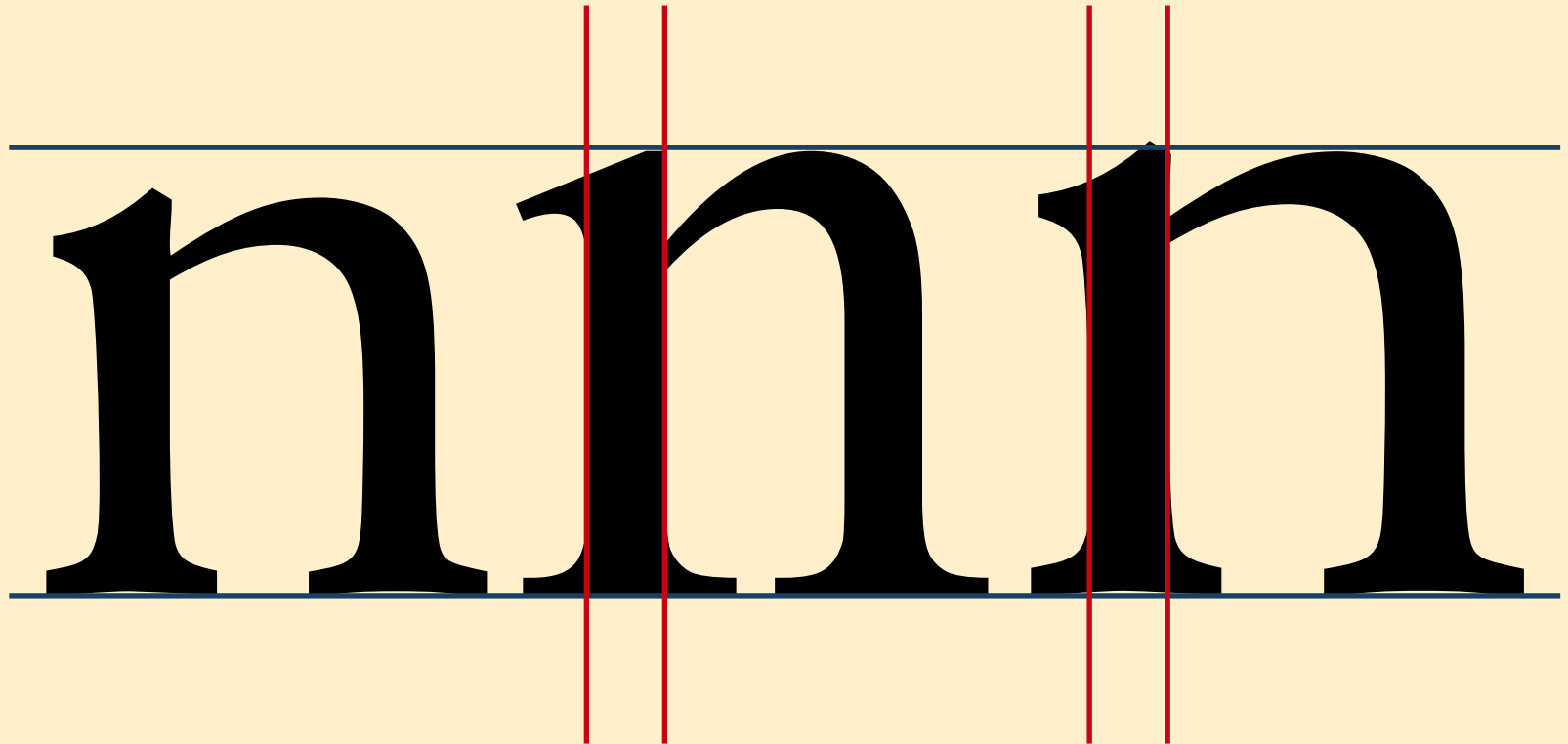
▶ Legibility

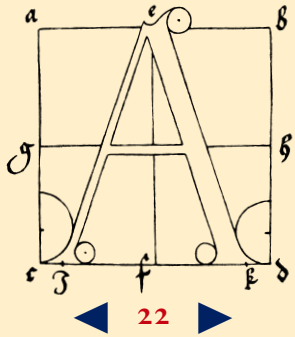
▶ Music

▶ Parameterizing

▶ Idiom

▶ Other scripts





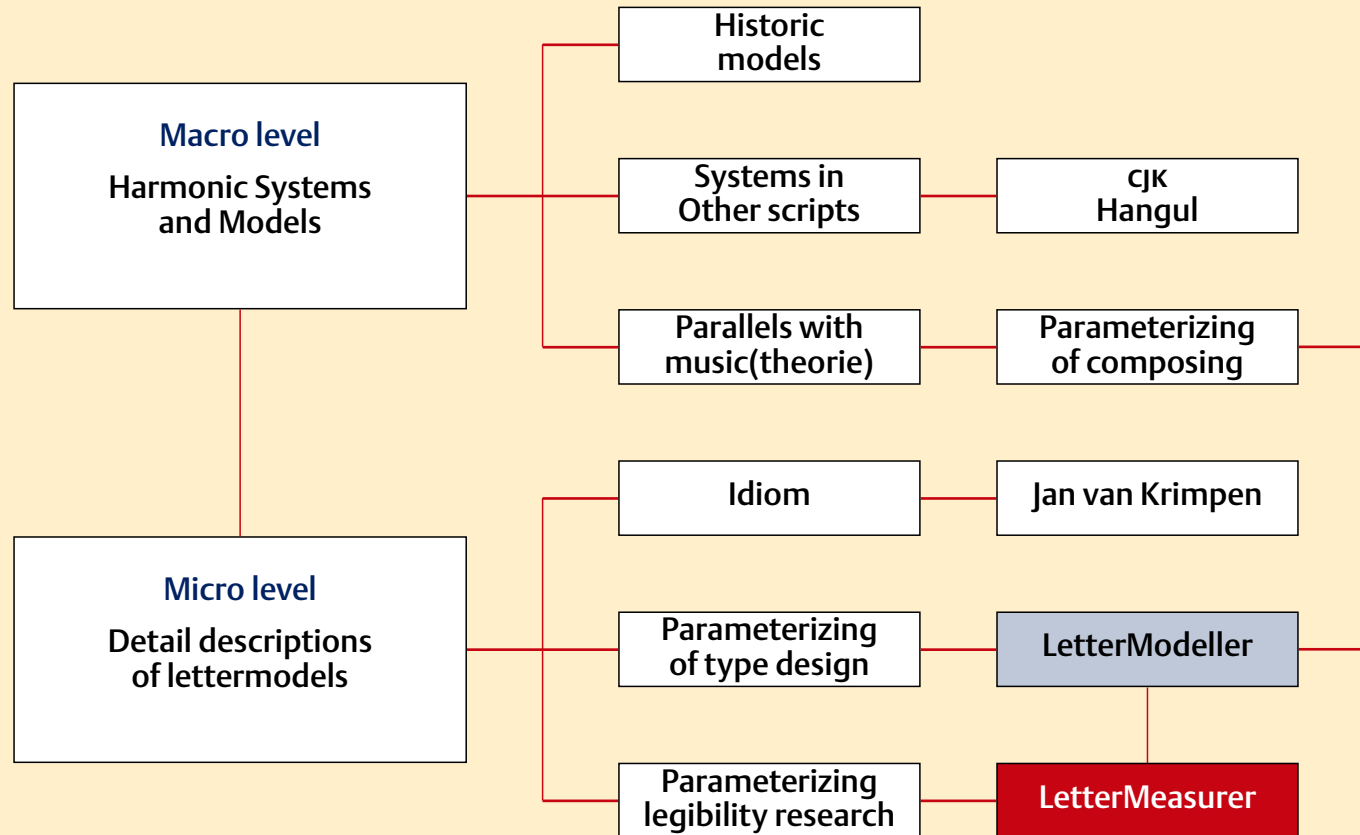
**AUTOMATING TYPE DESIGN PROCESSES**

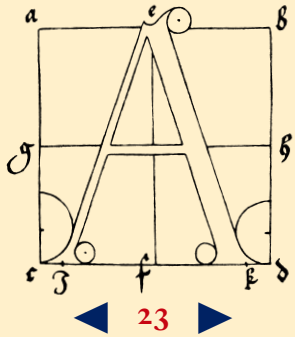
© FRANK E. BLOKLAND, MMIX

Main part

Appendix

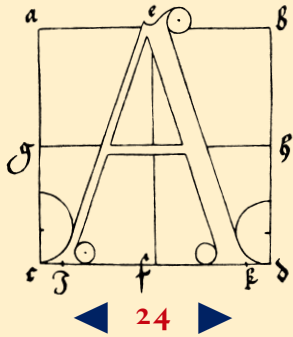
- ▶ IKARUS and FM
- ▶ Research
- ▼ Systems
  - Harmonic model
  - Proportional
  - Relational
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- ▶ Research
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  - Harmonic model
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▶ IKARUS and FM

▶ Research

▼ Systems

Harmonic model

Proportional

Relational

Rhythmic

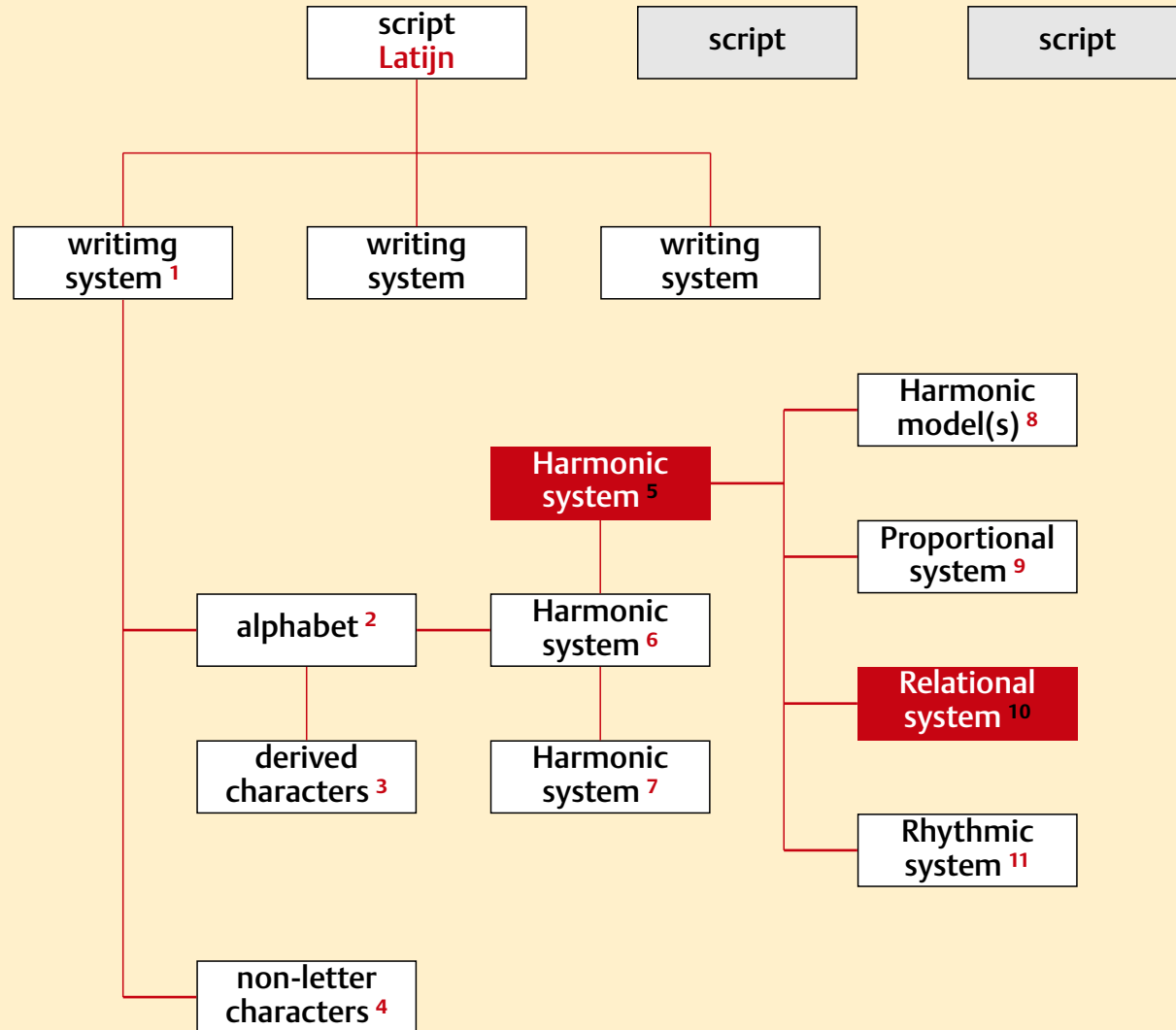
▶ Legibility

▶ Music

▶ Parameterizing

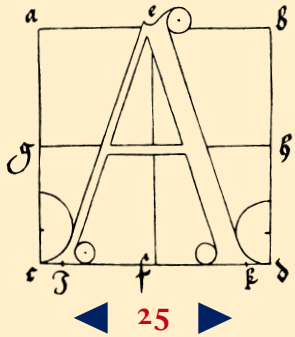
▶ Idiom

▶ Other scripts



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▶ IKARUS and FM

▶ Research

▼ Systems

Harmonic model

Proportional

Relational

Rhythmic

▶ Legibility

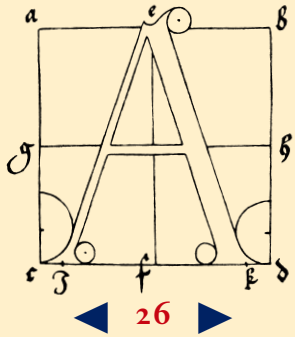
▶ Music

▶ Parameterizing

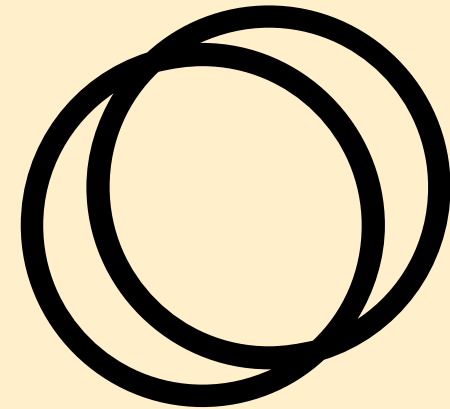
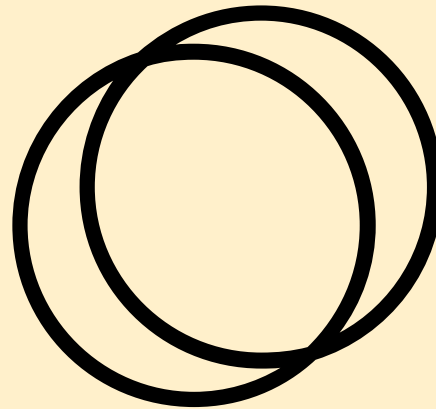
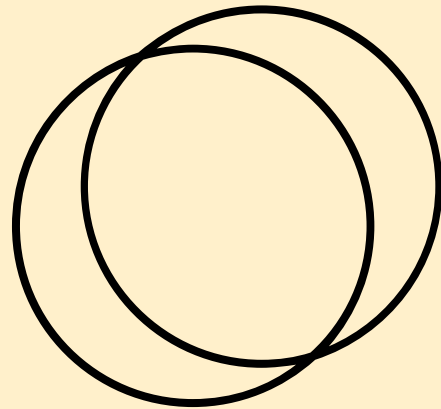
▶ Idiom

▶ Other scripts

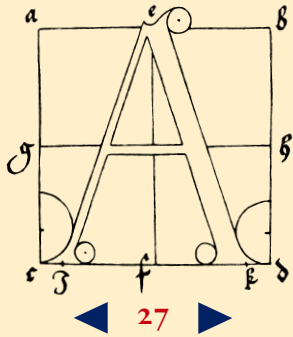




- ▶ IKARUS and FM
- ▶ Research
- ▼ Systems
  - Harmonic model
  - Proportional
  - Relational
  - Rhythmic



- ▶ Legibility
- ▶ Music
- ▶ Parameterizing
- ▶ Idiom
- ▶ Other scripts



▶ IKARUS and FM

▶ Research

▼ Systems

Harmonic model

Proportional

Relational

Rhythmic

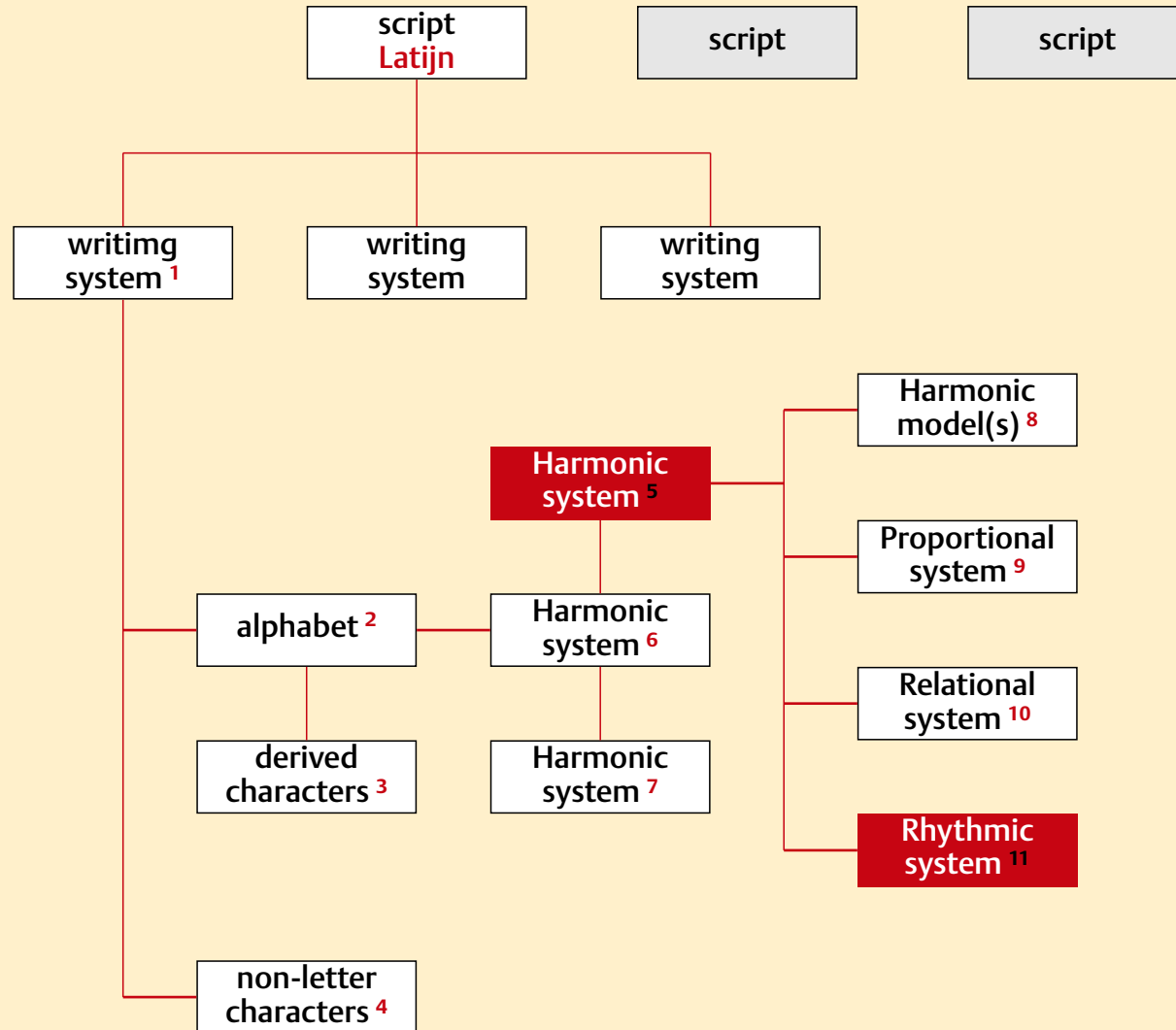
▶ Legibility

▶ Music

▶ Parameterizing

▶ Idiom

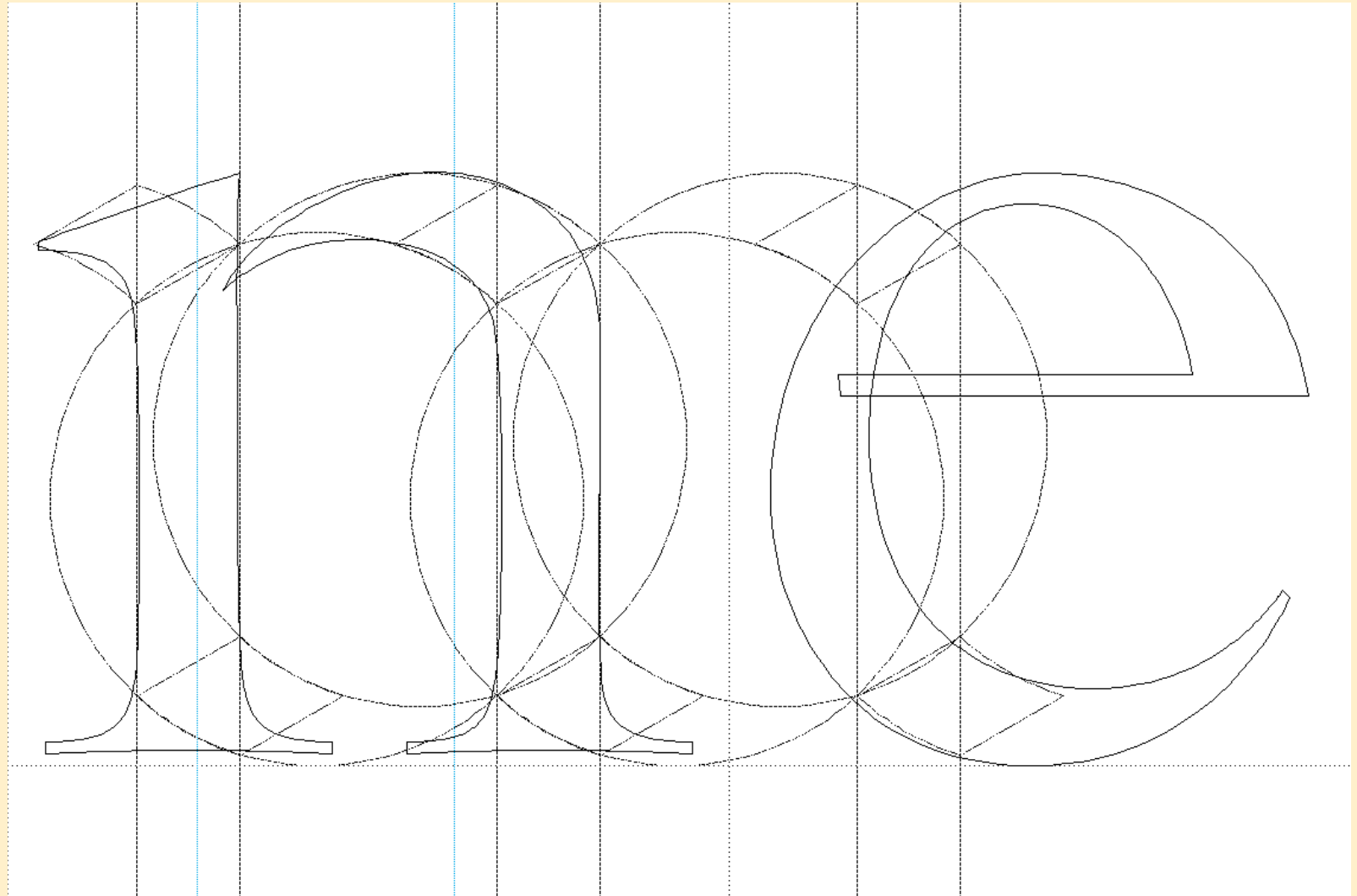
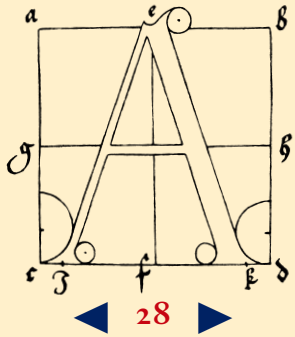
▶ Other scripts



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10. Pen width/x-height/contrast
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**AUTOMATING TYPE DESIGN PROCESSES**

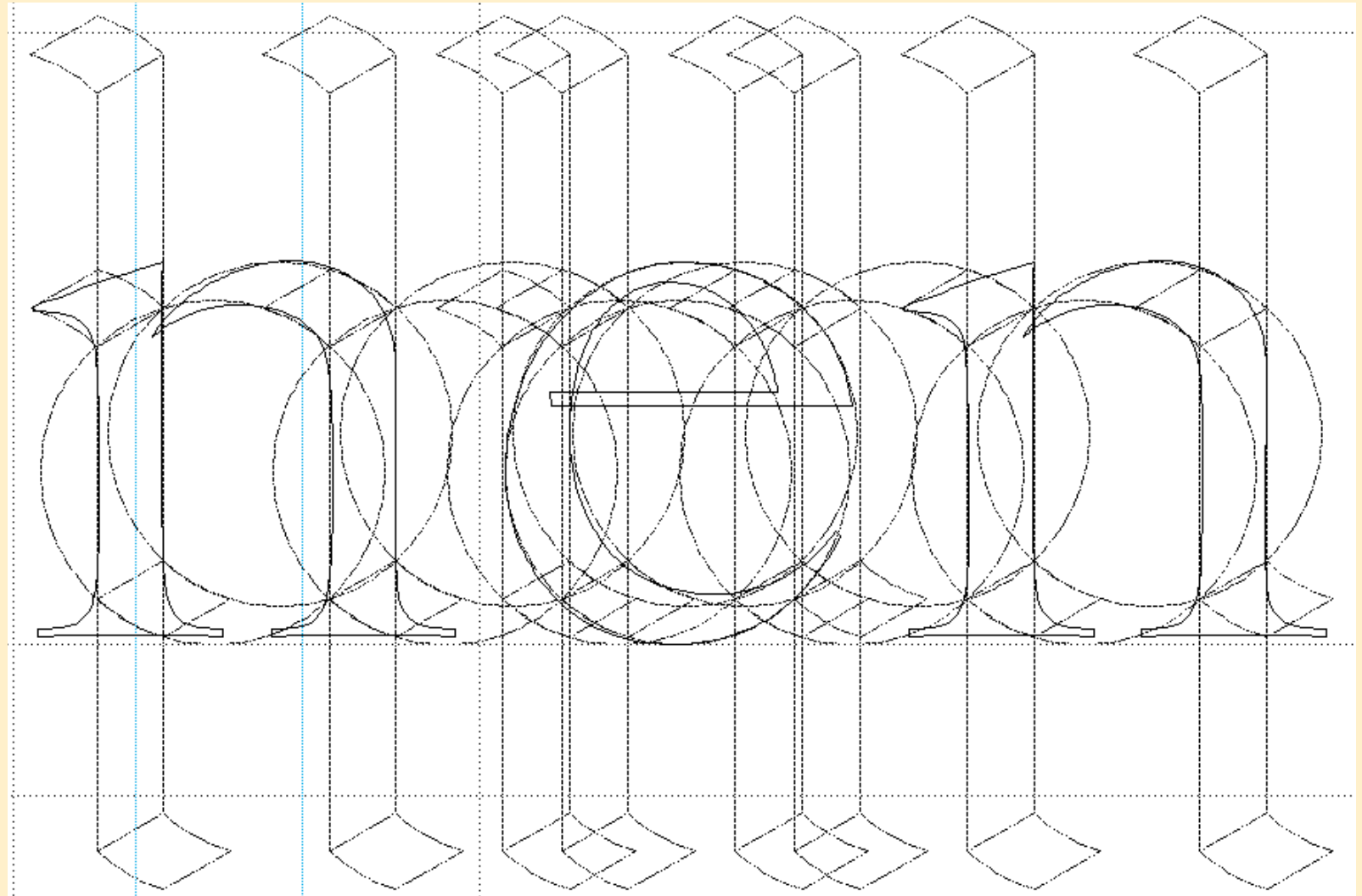
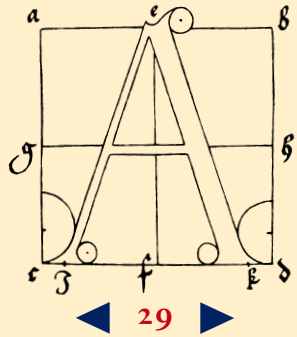
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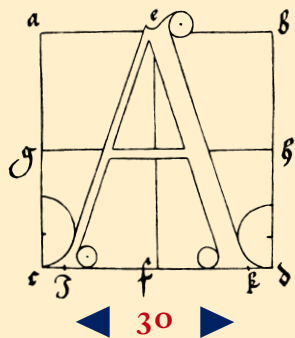
- ▶ IKARUS and FM
- ▶ Research
- ▼ Systems
  - Harmonic model
  - Proportional
  - Relational
  - Rhythmic
- ▶ Legibility
- ▶ Music
- ▶ Parameterizing
- ▶ Idiom
- ▶ Other scripts

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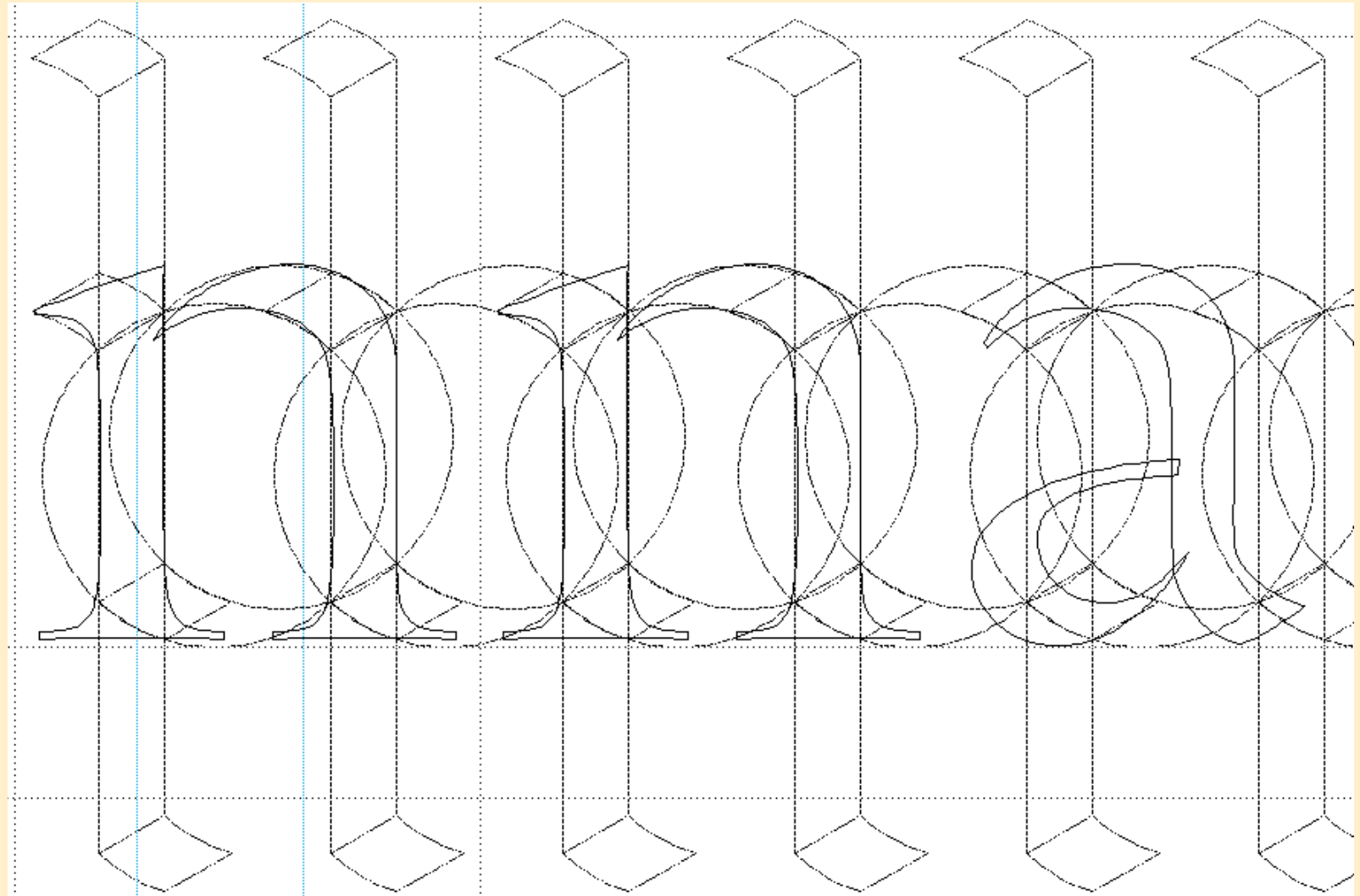
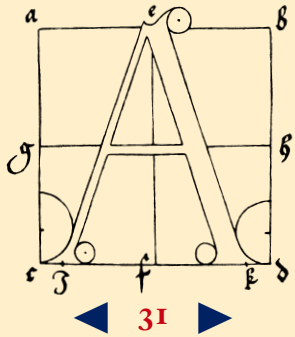


- ▶ IKARUS and FM
- ▶ Research
- ▼ Systems
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  - Proportional
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  - Rhythmic
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- ▶ Idiom
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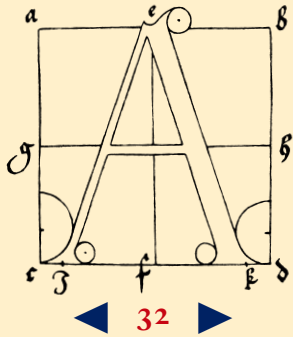


- ▶ IKARUS and FM
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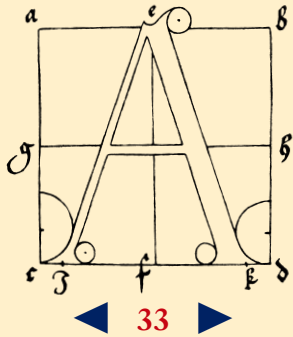
- ▶ IKARUS and FM
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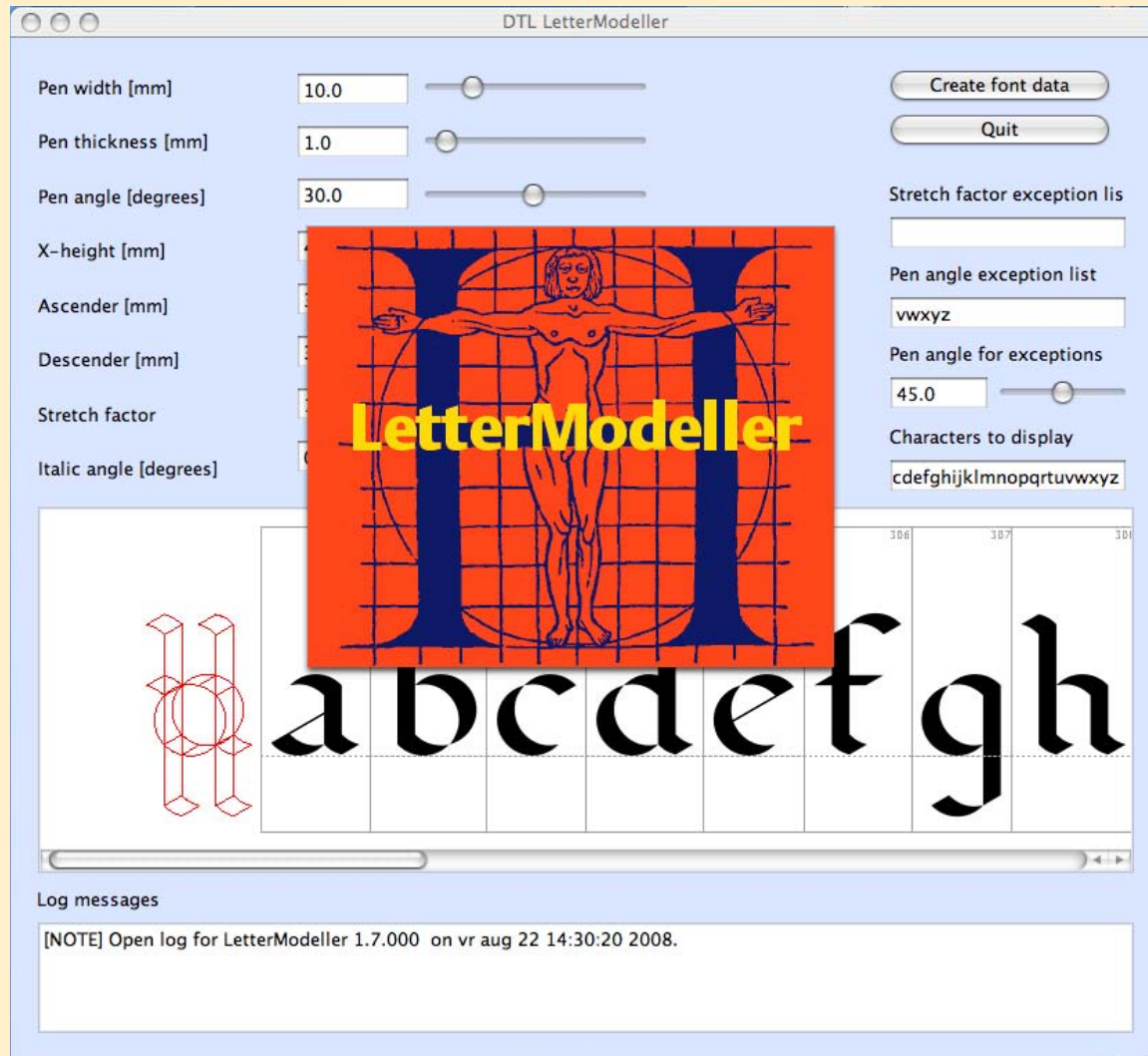
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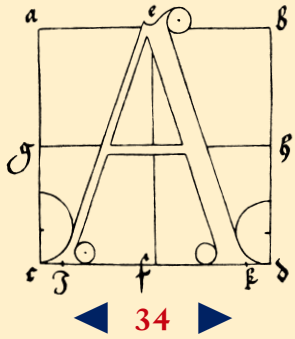




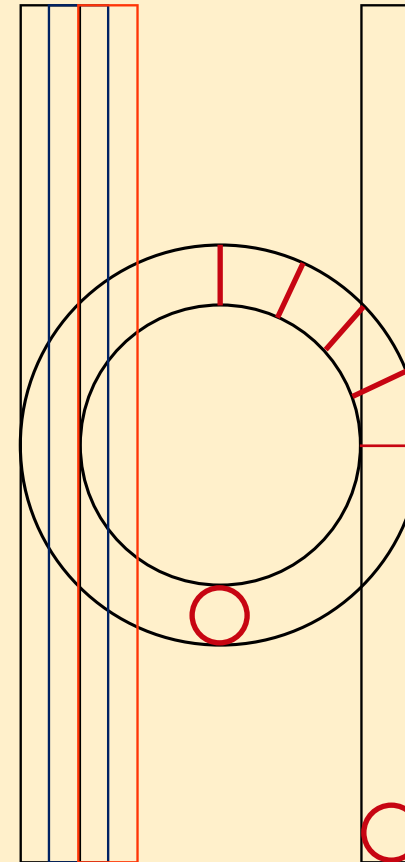
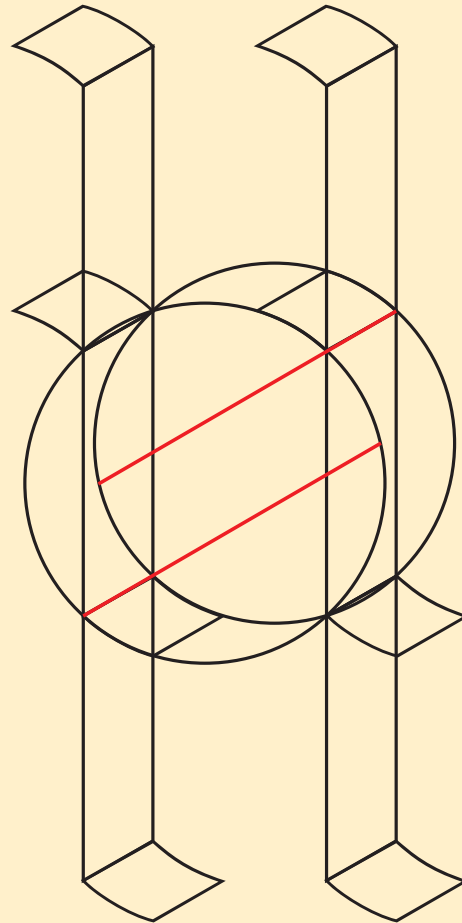


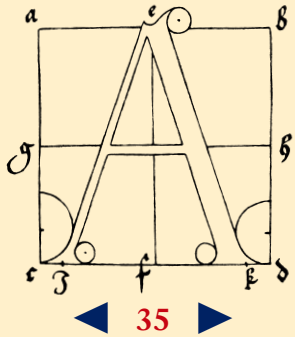
- ▶ IKARUS and FM
- ▶ Research
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  - Rhythmic
- ▶ Legibility
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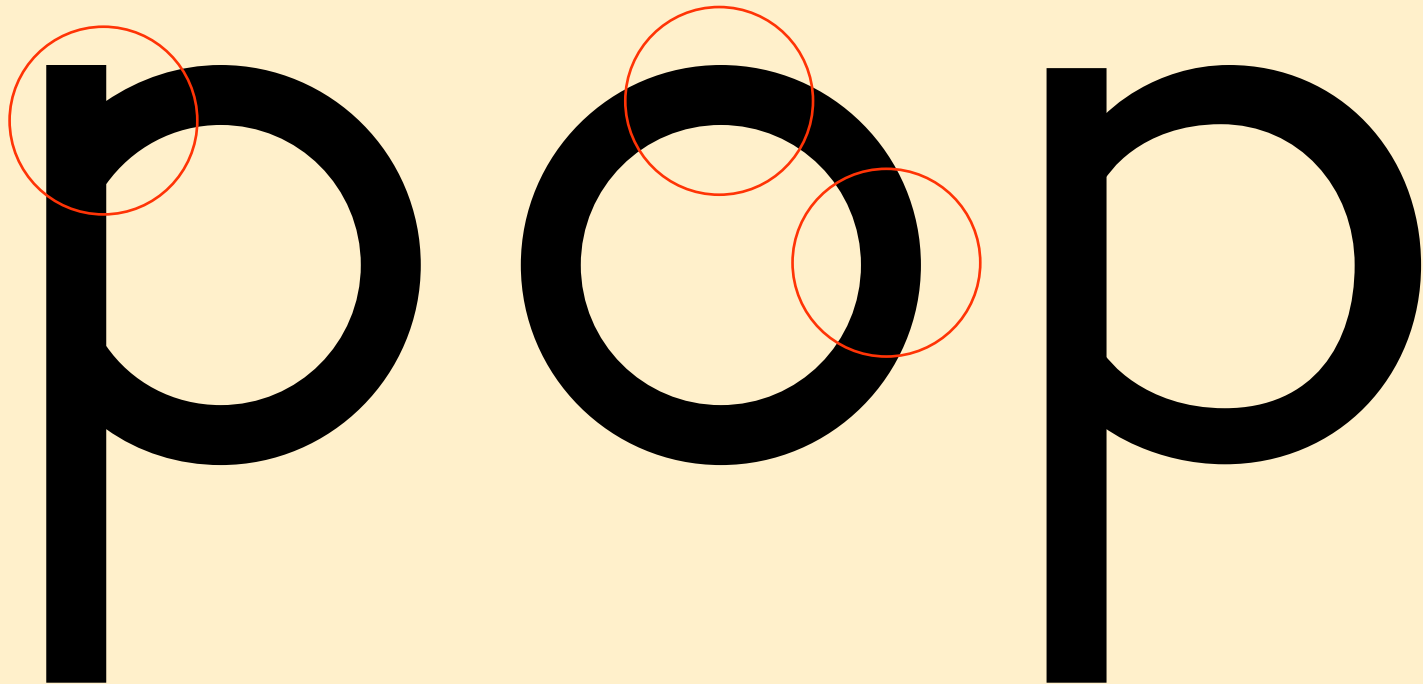


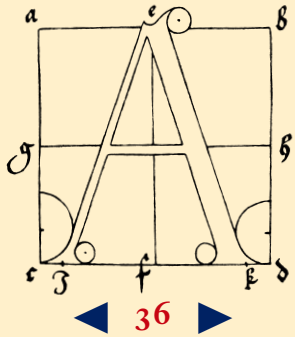
- ▶ IKARUS and FM
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- ▶ IKARUS and FM
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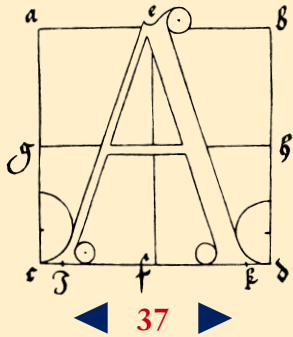


- ▶ IKARUS and FM
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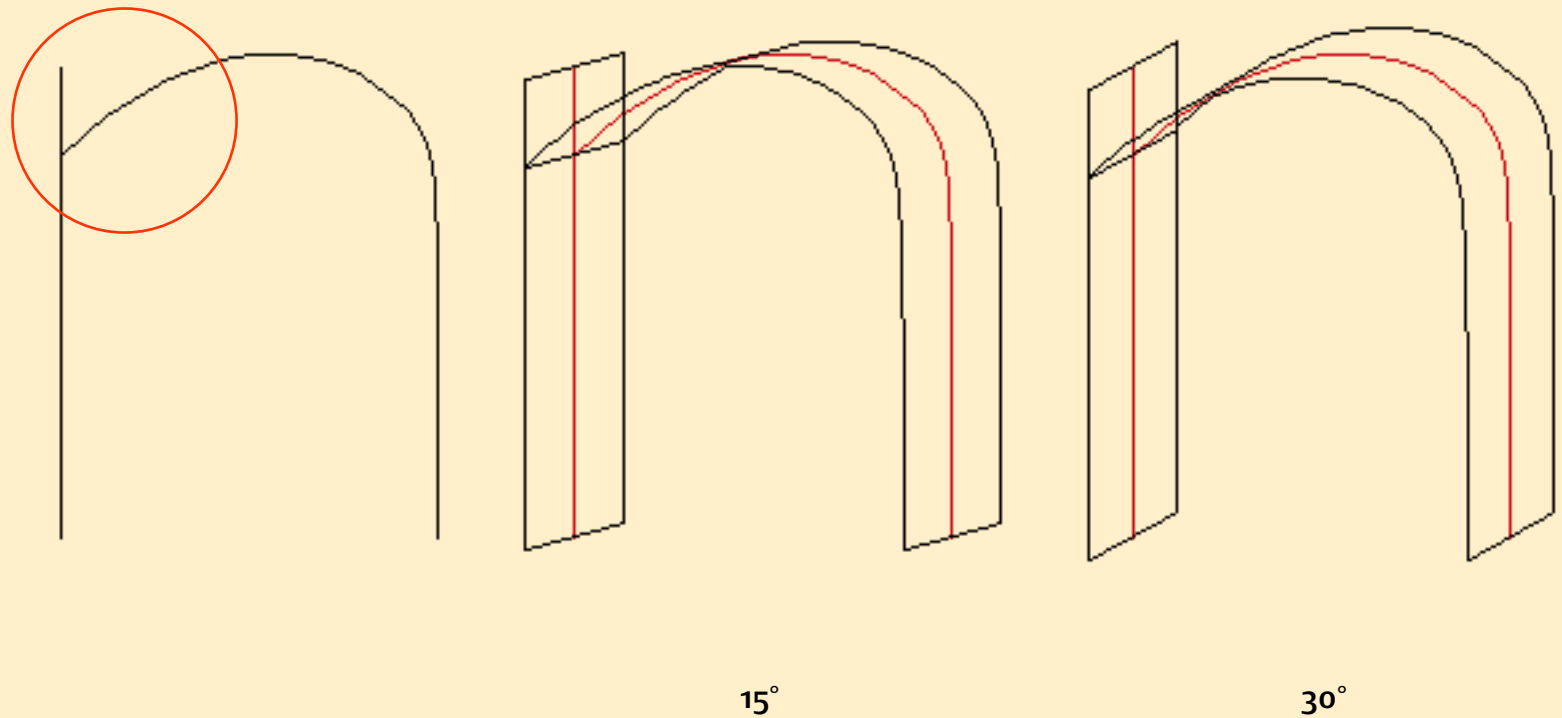
# Futura / abc

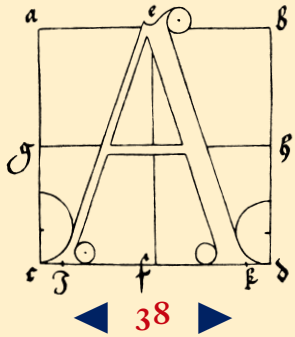
# Paul Renner

# contrastloos



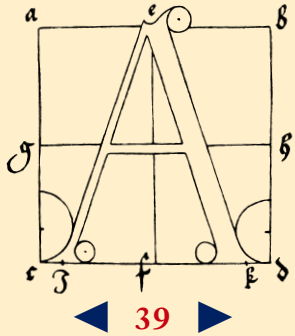
- ▶ IKARUS and FM
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  - Relational
  - Rhythmic
- ▶ Legibility
- ▶ Music
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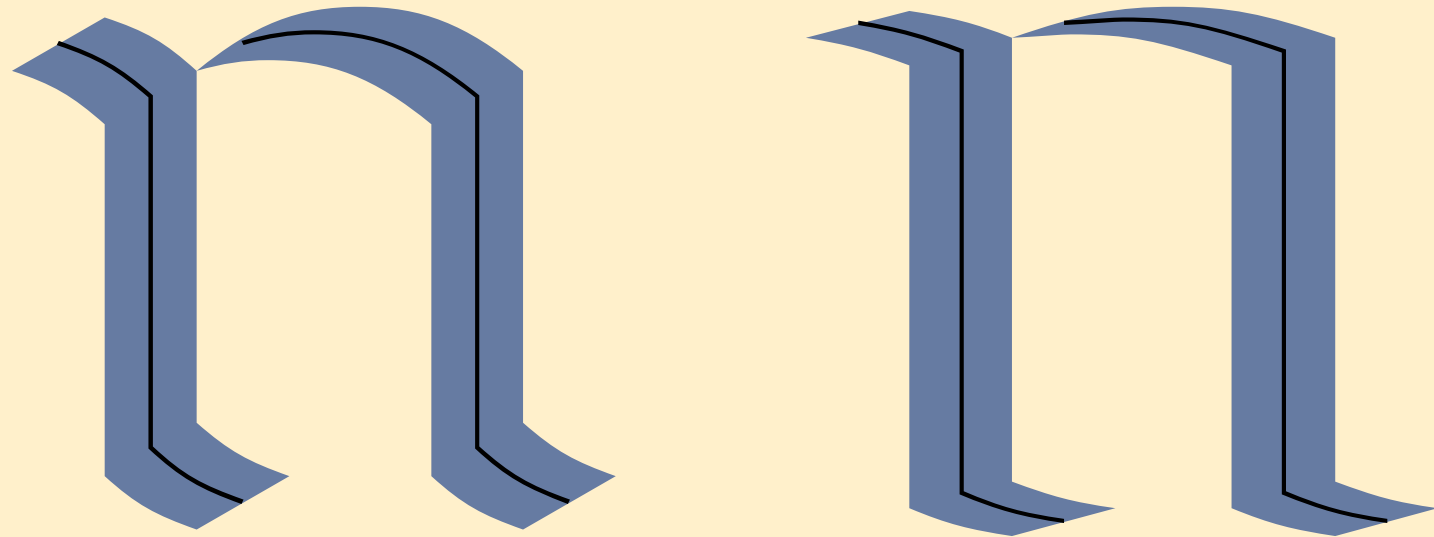


- ▶ IKARUS and FM
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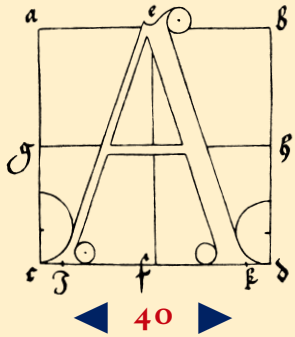


- ▶ IKARUS and FM
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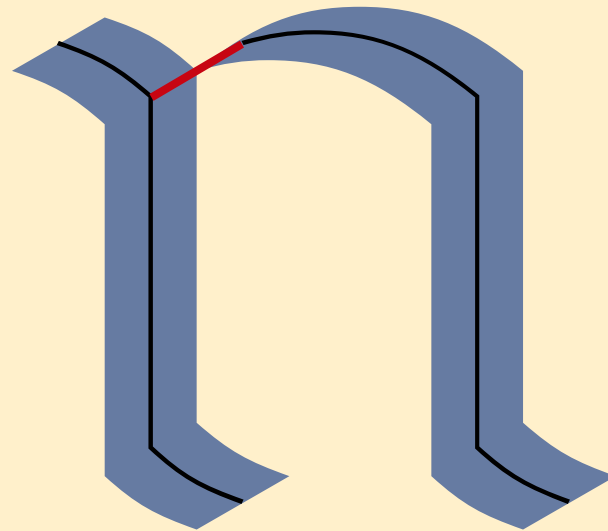
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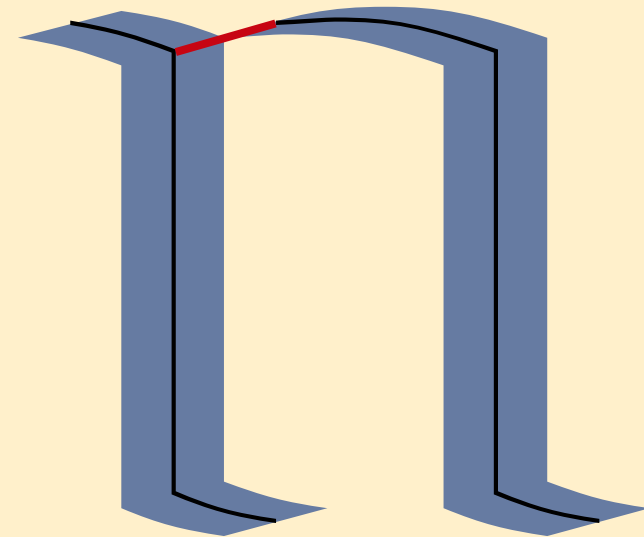


vector bridge

- ▶ IKARUS and FM
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- ▶ Other scripts

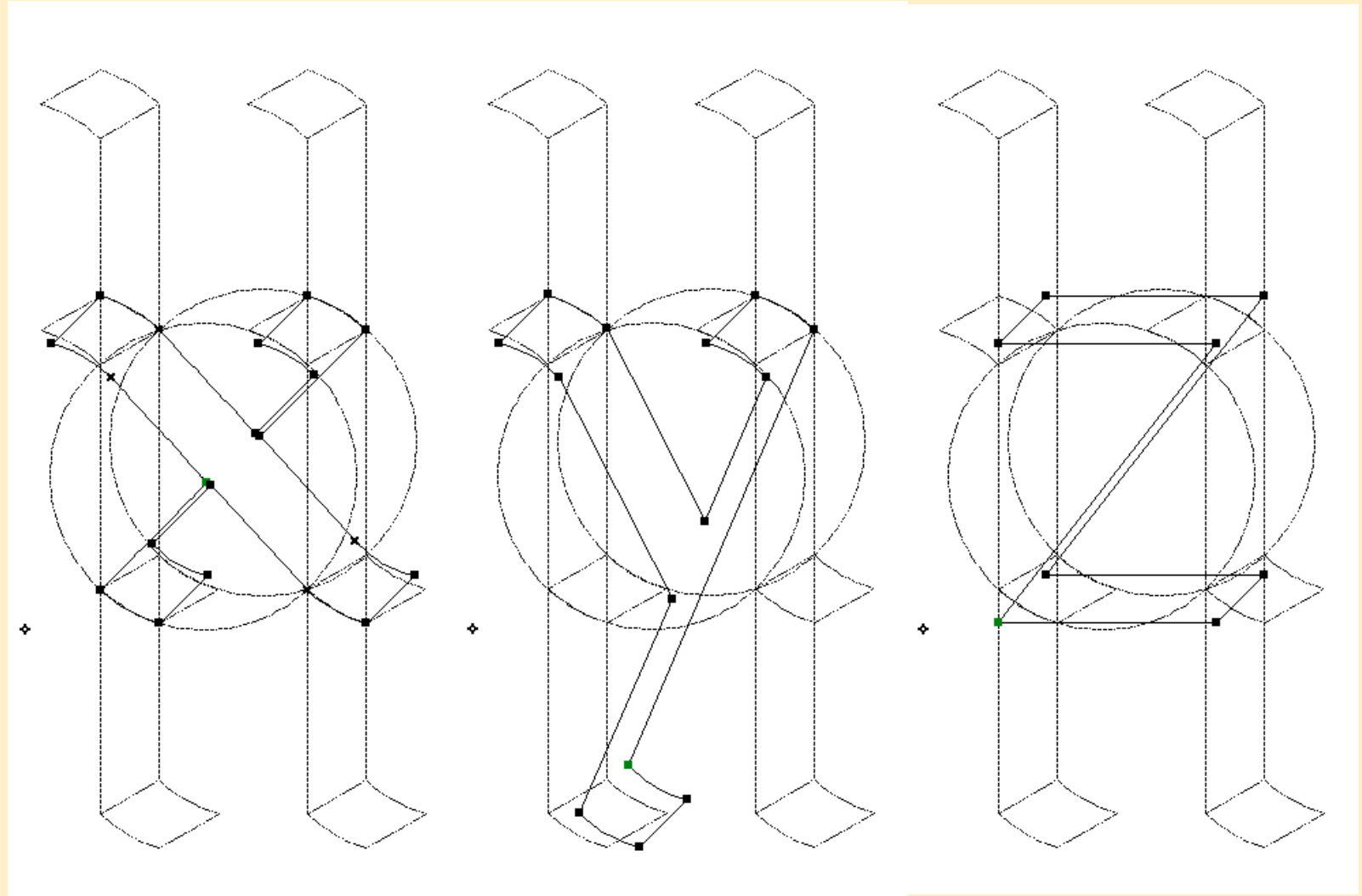
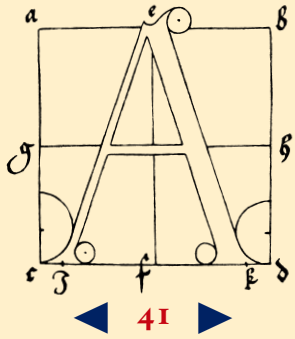


30°

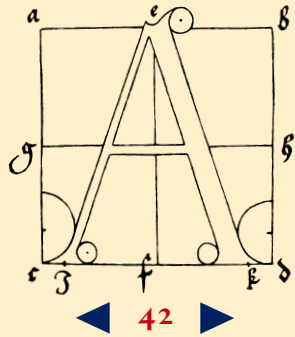


15°





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▶ IKARUS and FM

▶ Research

▼ Systems

Harmonic model

Proportional

Relational

Rhythmic

▶ Legibility

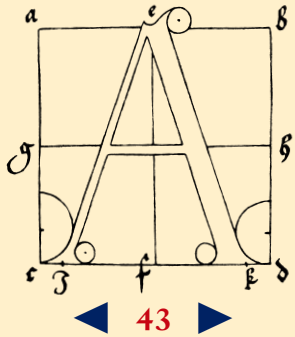
▶ Music

▶ Parameterizing

▶ Idiom

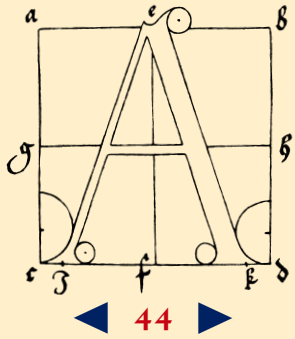
▶ Other scripts

			Ionia	Athens	Corinth	Argos	Euboea (cf. Etruscan)
A	α	a	AA	AA	AA	AA	AA
B	β	b	B	B	⊏	▷	B
Γ	γ	g	Γ	^	<<	Γ^	<<
Δ	δ	d	Δ	Δ	Δ	▷	▷▷
E	ε	e	⊕E	⊕E	B	⊕E	⊕E
F	F	w	—	F	F	⊕F	F
Z	ζ	z	I	I	I	I	I
H	η	ē	⊕H	—	—	—	—
	[h]	h	—	⊕H	⊕H	⊕H	⊕H
Θ	θ	th	⊕⊕⊕	⊕⊕⊕	⊕⊕⊕	⊕⊕⊕	⊕⊕⊕
I	ι	i	I	I	ε	I	I
K	κ	k	K	K	K	K	K
Λ	λ	l	Γ^	∨	Γ^	∨	∨
M	μ	m	MM	MM	MM	MM	MMM
N	ν	n	MN	MN	MN	MN	MN
Ξ	ξ	x	⊕	(X)	⊕	⊕H	X
O	ο	o	O	O	O	O	O
Π	π	p	Γ	Γ	Γ	Γ	ΓΓ
Μ	—	s	—	—	M	M	M(?)
Ϻ	ρ	q	Ϻ	Ϻ	Ϻ	Ϻ	Ϻ
Ρ	ρ	r	PD	PR	PR	PR	P
Σ	σζ	s	ε	ς	—	ε	ς
T	τ	t	T	T	T	T	T
Υ	υ	u	VY	YV	YV	YV	YV
Φ	φ	ph	φ	φ⊕	φ⊕	φ⊕	φ⊕
X	χ	kh	X	X	X	X	YV
Ψ	ψ	ps	YV	(φς)	YV	∨	(φς)
Ω	ω	ō	ΩΩ	—	—	—	—

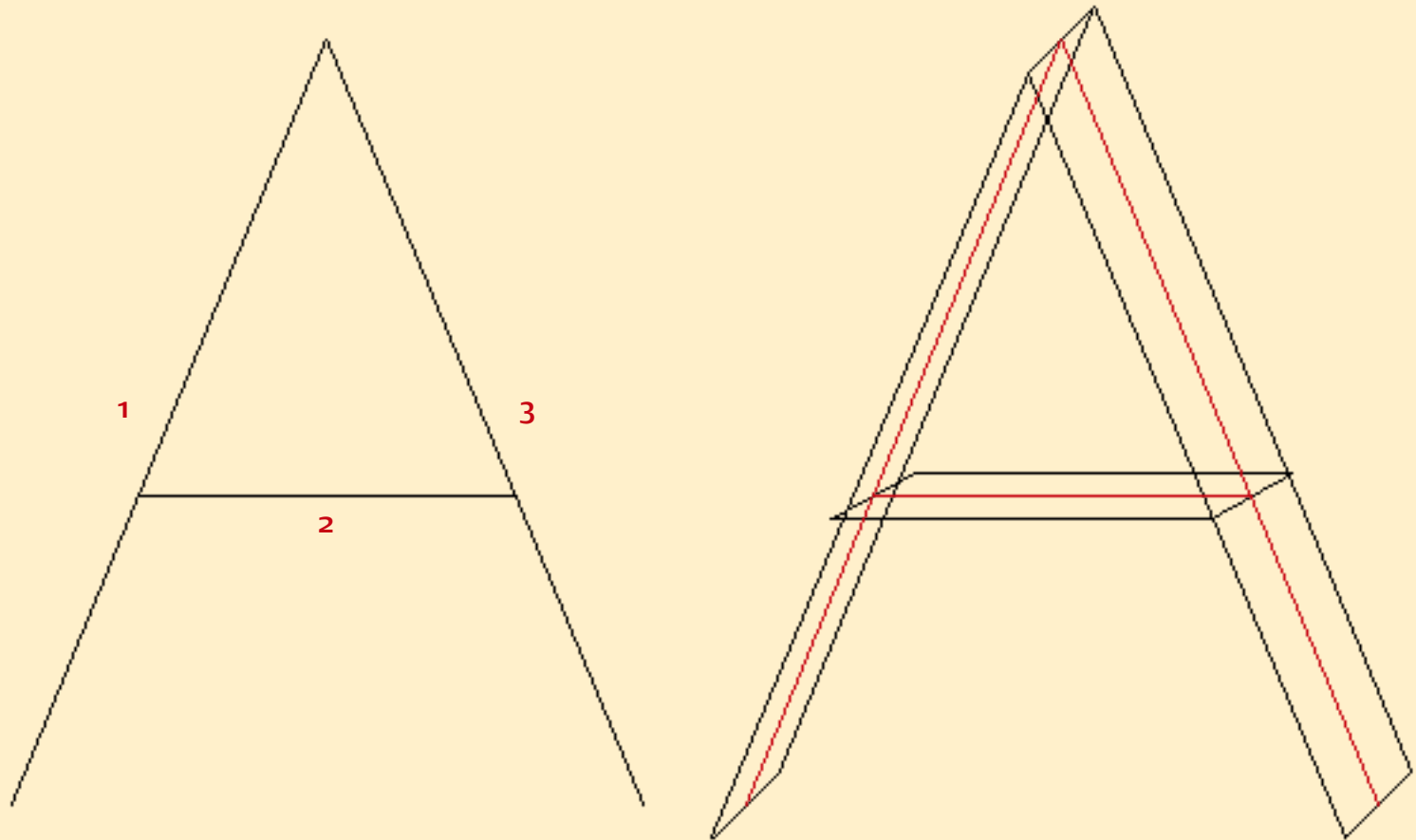


- ▶ IKARUS and FM
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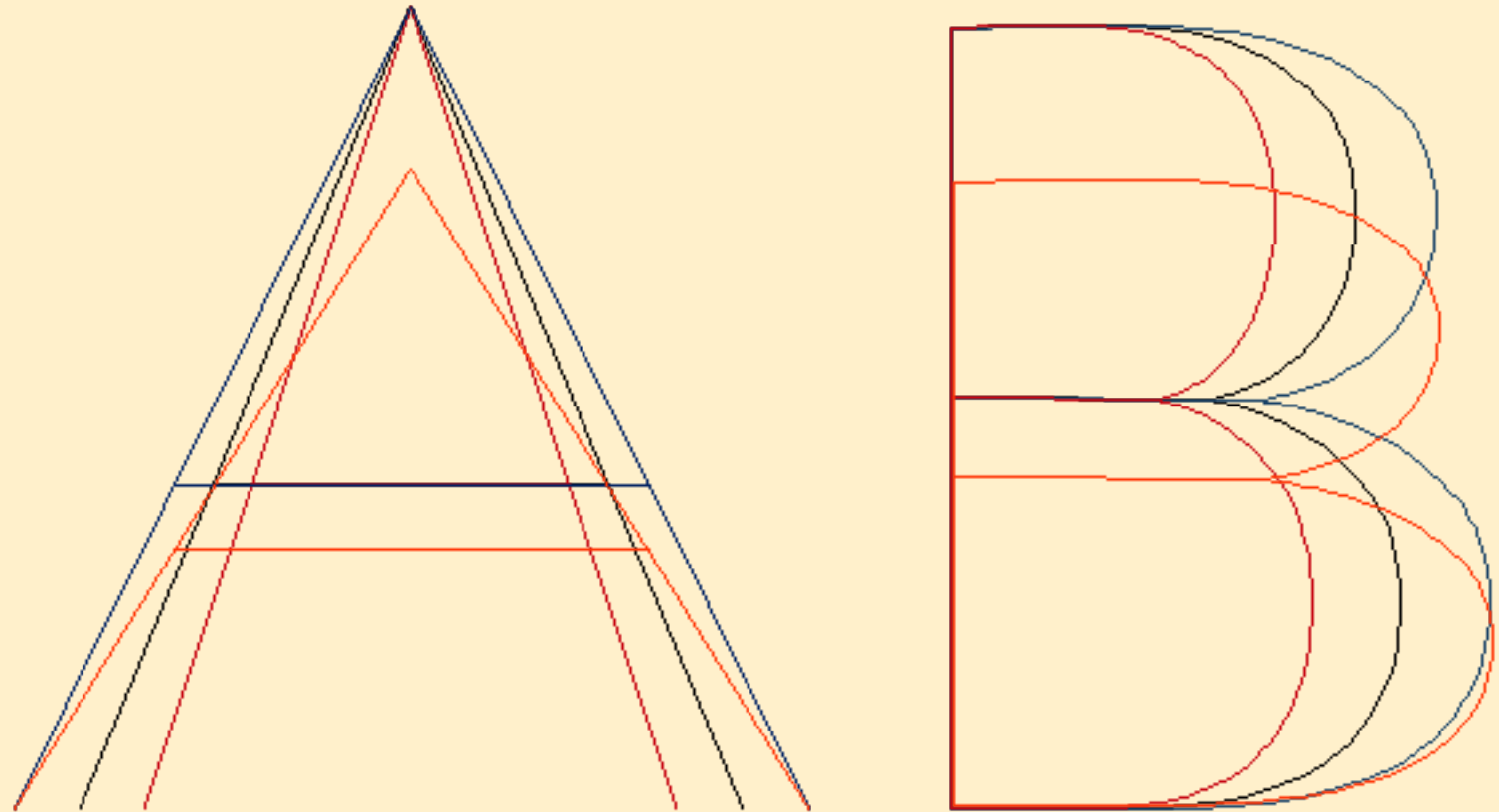
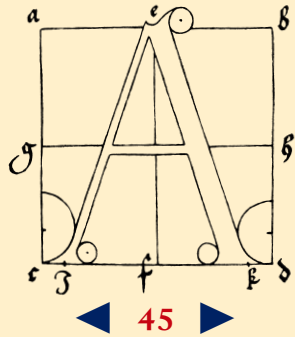


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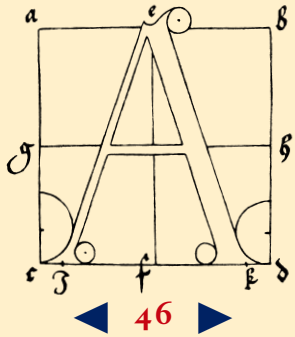


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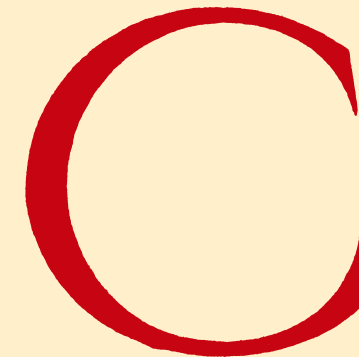
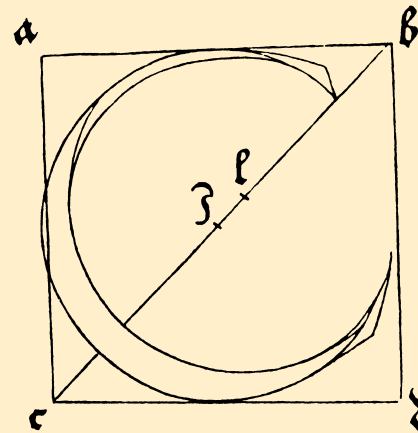
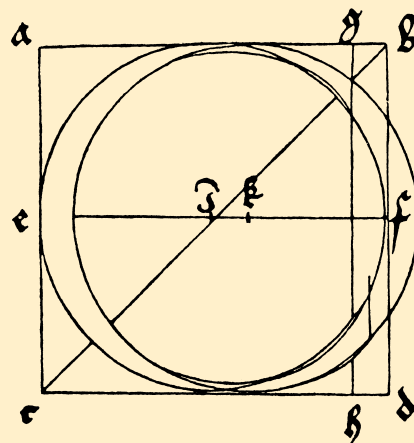
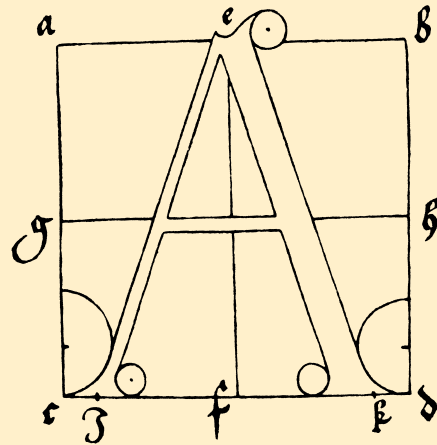
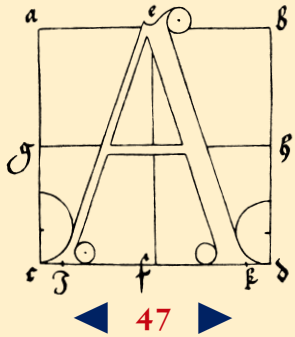


- ▶ IKARUS and FM
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  - Rhythmic
- ▶ Legibility
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- ▶ Parameterizing
- ▶ Idiom
- ▶ Other scripts

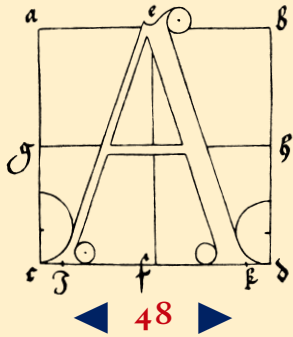


- ▶ IKARUS and FM
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- ▶ Idiom
- ▶ Other scripts



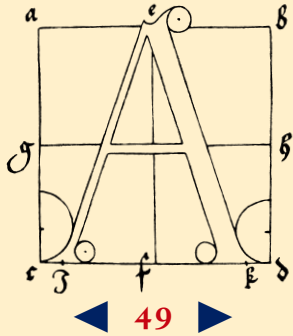
## Legibility

- ▶ IKARUS and FM
- ▶ Research
- ▶ Systems
- ▶ **Legibility**
- ▶ Music
- ▶ Parameterizing
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- ▶ Other scripts

*‘The problem with legibility research is that it gives you no clues as a designer to improve the letterforms. Thus the only thing that you can simply do is to experiment with the shapes.’*

Gerard Unger

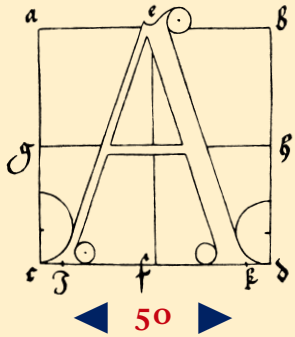




minommri

minommri

- ▶ IKARUS and FM
- ▶ Research
- ▶ Systems
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  - Parameterizing
  - Music
- ▶ Music
- ▶ Parameterizing
- ▶ Idiom
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▶ IKARUS and FM

▶ Research

▶ Systems

▼ Legibility

Parameterizing

Music

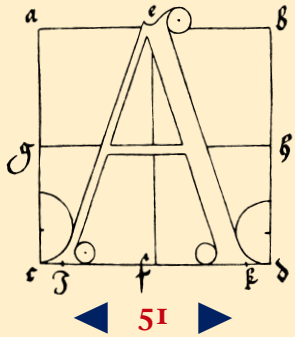
▶ Music

▶ Parameterizing

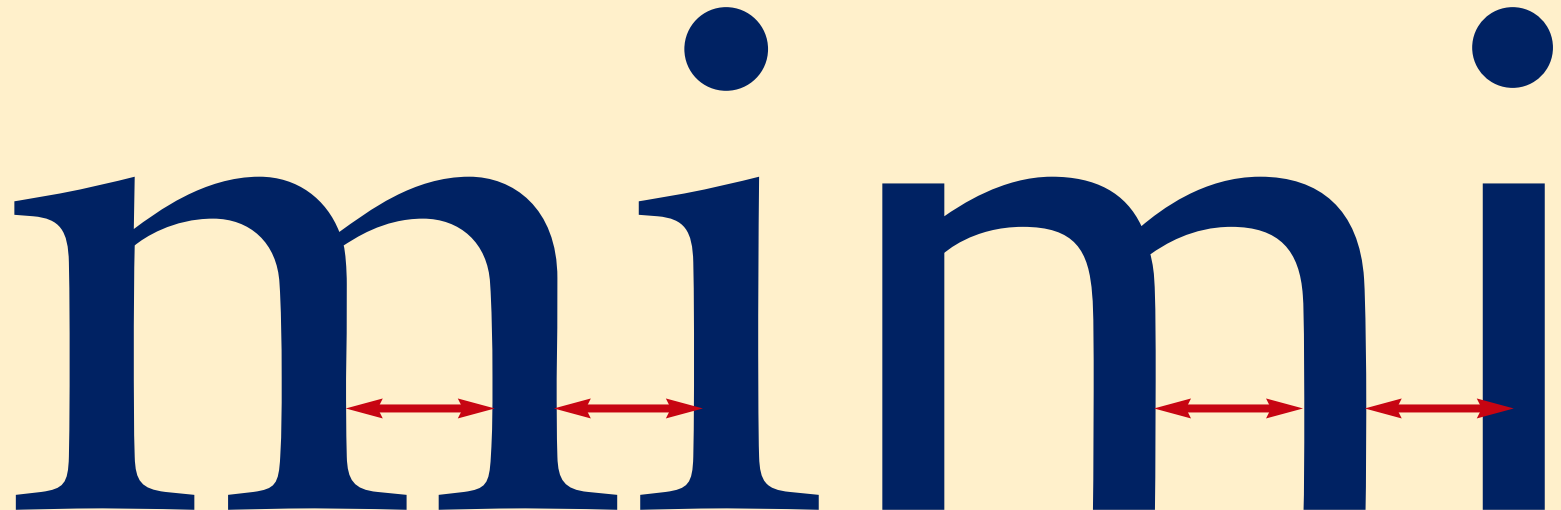
▶ Idiom

▶ Other scripts



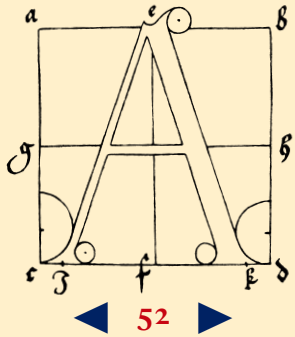


- ▶ IKARUS and FM
- ▶ Research
- ▶ Systems
- ▼ Legibility
  - Parameterizing
  - Music

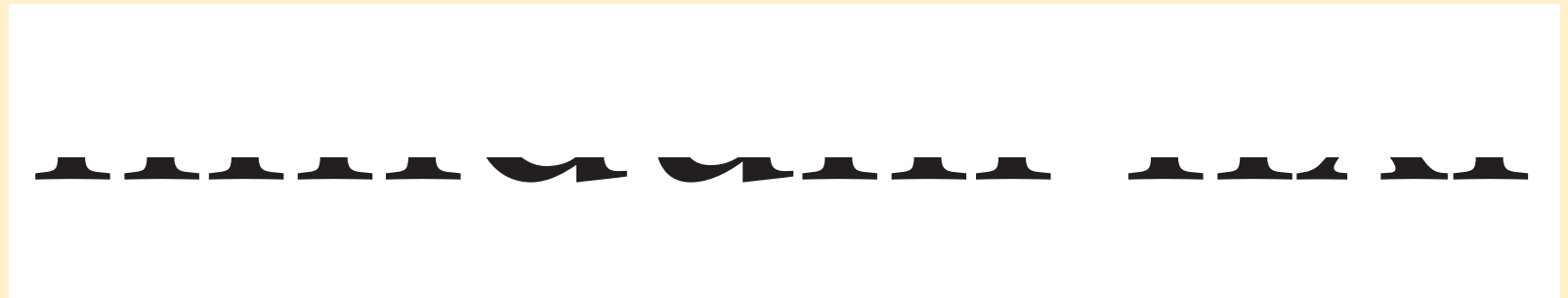


stem interval

- ▶ Music
- ▶ Parameterizing
- ▶ Idiom
- ▶ Other scripts

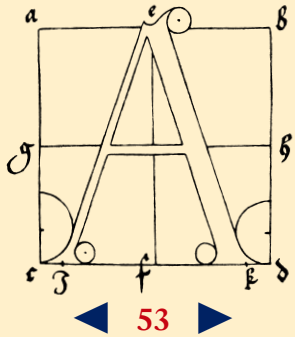


Cantus Firmus



Scriptus Firmus

- ▶ IKARUS and FM
- ▶ Research
- ▶ Systems
- ▼ Legibility
  - ▶ Parameterizing Music
- ▶ Music
- ▶ Parameterizing
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- ▶ IKARUS and FM
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- ▶ Music
- ▶ Parameterizing
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Chor *mf* Wo ist

Sopran

Alt *mf* *tr* Wo ist denn dein Freund hin-ge - gan - - gen, o du

Tenor *mf* *tr* Wo ist denn dein Freund hince - gan - - gen, o

Baß *mf* Wo ist denn dein

Klavier-Auszug *mf* *tr*

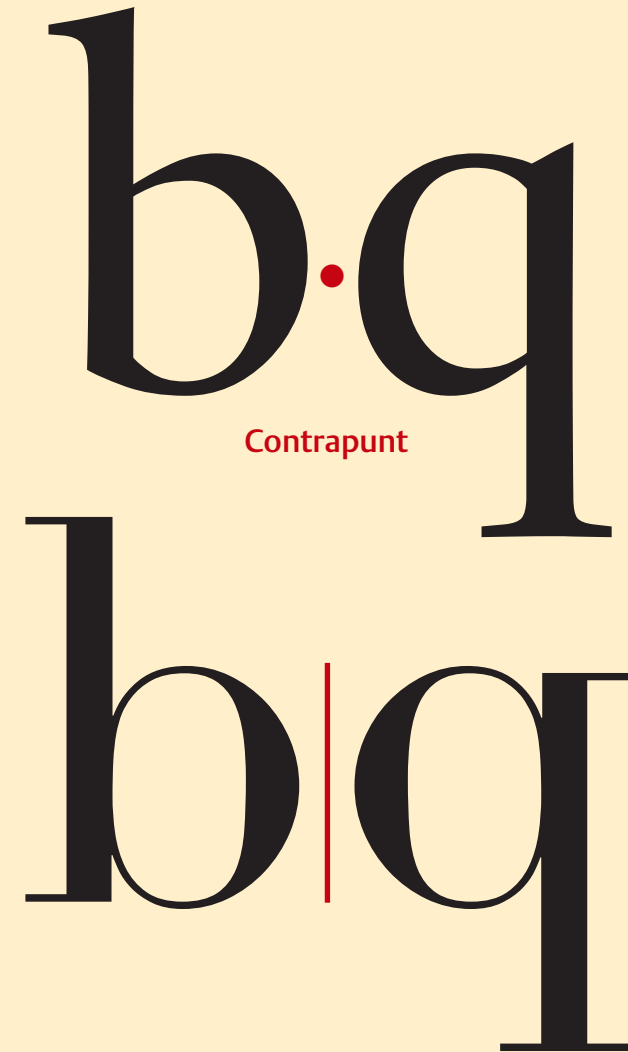
Trio

I. Violinen *p*

II. Violinen *p*

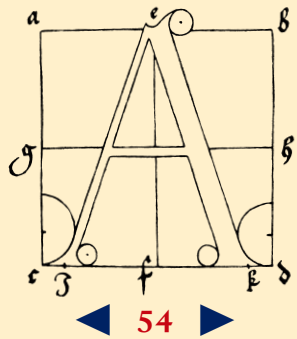
Bratschen *p*

Kontrabässe *p*



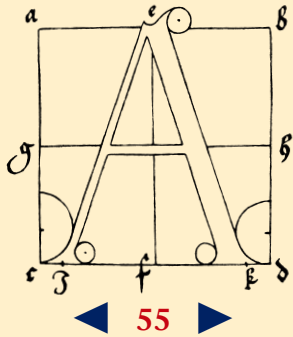
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A collage of musical notation. It features a portrait of a man wearing a hat, a portrait of a man in a wig, and several staves of musical notation, including a complex piece with many notes and accidentals.

- ▶ IKARUS and FM
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  - Würfelspiel
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- ▶ Idiom
- ▶ Other scripts



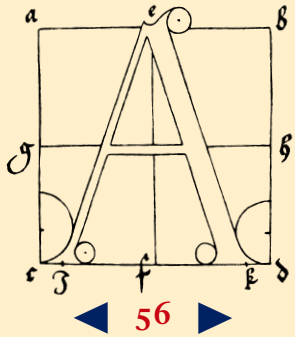
- ▶ IKARUS and FM
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1. Walzerteil

	I	II	III	IV	V	VI	VII	VIII
2	96	22	141	41	105	122	11	30
3	32	6	128	63	146	46	134	81
4	69	95	158	13	153	55	110	24
5	40	17	113	85	161	2	159	100
6	148	74	163	45	80	97	36	107
7	104	157	27	167	154	68	118	91
8	152	60	171	53	99	133	21	127
9	119	84	114	50	140	86	169	94
10	98	142	42	156	75	129	62	123
11	3	87	165	61	135	47	147	33
12	54	130	10	103	28	37	106	5

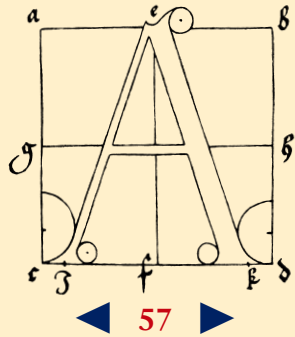
2. Walzerteil

	I	II	III	IV	V	VI	VII	VIII
2	70	121	26	9	112	49	109	14
3	117	39	126	56	174	18	116	83
4	66	139	15	132	73	58	145	79
5	90	176	7	34	67	160	52	170
6	25	143	64	125	76	136	1	93
7	138	71	150	29	101	162	23	151
8	16	155	57	175	43	168	89	172
9	120	88	48	166	51	115	72	111
10	65	77	19	82	137	38	149	8
11	102	4	31	164	144	59	173	78
12	35	20	108	92	12	124	44	131

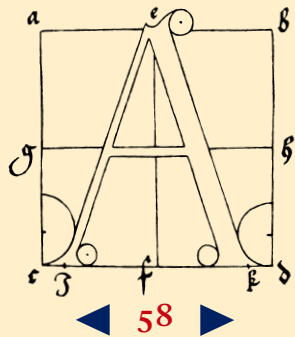


- ▶ IKARUS and FM
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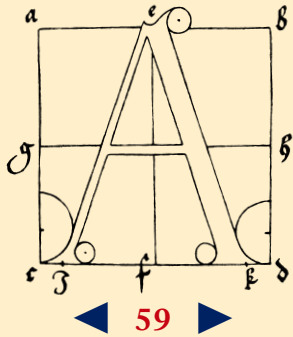




- ▶ IKARUS and FM
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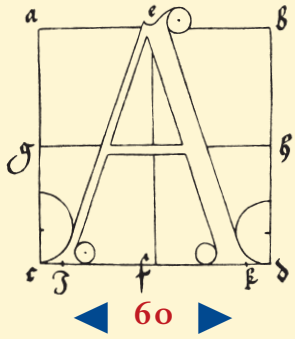


- ▶ IKARUS and FM
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- ▶ Other scripts



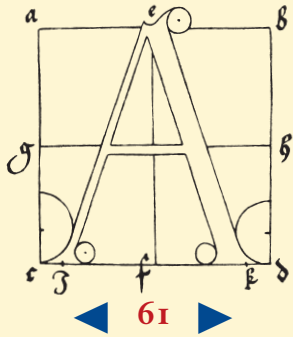
ophidiophobia pear  
lipic or unpincipled  
moier um unableer  
binie peerie dad calc  
anean he plane equn

- ▶ IKARUS and FM
- ▶ Research
- ▶ Systems
- ▶ Legibility
- ▶ Music
- ▼ **Parameterizing**
  - Macro–Micro
  - LetterModeller
  - Structurs
- ▶ Idiom
- ▶ Other scripts



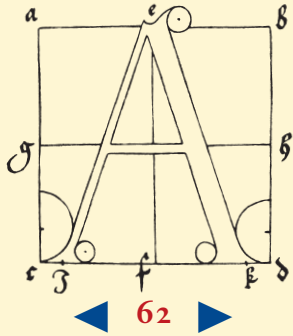
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- ▶ Research
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- ▶ Other scripts

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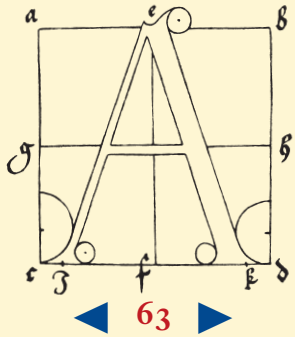
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- ▶ IKARUS and FM
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- ▶ Systems
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  - Macro–Micro
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- ▶ Idiom
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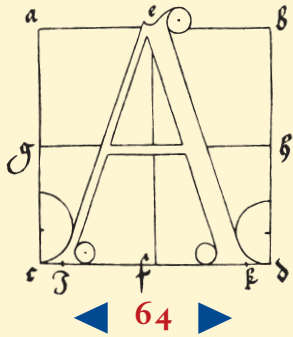
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- ▶ IKARUS and FM
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ophidiophobia pear  
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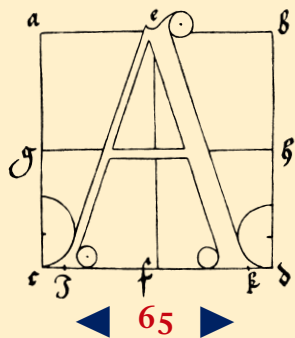
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- ▶ Research
- ▶ Systems
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ophidiophobia pear  
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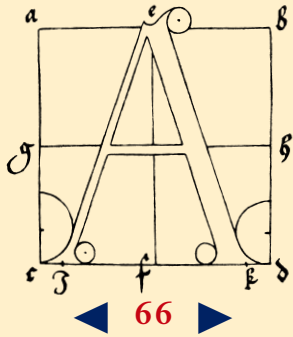
- ▶ IKARUS and FM
- ▶ Research
- ▶ Systems
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- ▼ **Parameterizing**
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  - LetterModeller
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- ▶ Idiom
- ▶ Other scripts





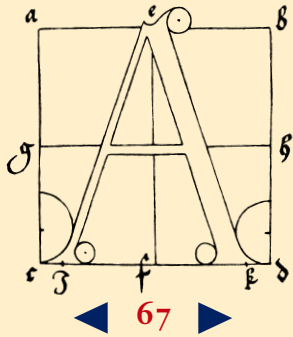
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- ▶ Research
- ▶ Systems
- ▶ Legibility
- ▶ Music
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  - Macro–Micro
  - LetterModeller**
  - Structurs**
  
- ▶ Idiom
- ▶ Other scripts

**n e e**



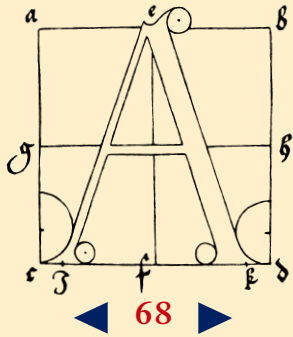
amari. Nihil eīm mihi minus hoīs uide  
dere in amore his a qbus prouocere. Is m  
nagno meo qdē dolore aliqd a suis uel p  
delatum: quo tuus aīus a se eff& alienio  
bi notum esse arbitror) temere affirmare  
propter occultas hominum uoluntates n  
nimum p̄spectū habeo: cognitū: iudicati  
bendum non necessaria. Volo eīm hoc t  
: q̄ epistolā. Auctus Antonii beneficio ef

- ▶ IKARUS and FM
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- ▶ Music
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  - Macro-Micro
  - LetterModeller**
  - Structurs**
- ▶ Idiom
- ▶ Other scripts

no aucto, era di folgorate carbūculo  
nebre, di expolitissime cælature, long  
Ma quale operature cōsiderare si doue  
fice furono fabricate.  
tera facia optimañte tale dimōstraua  
gnate. Allaq̃le el fūmo Iupiter diuin  
tonitri & fulmini li appeua, itāto ch  
cōbusto, uno nobilissimo & diuo ifar



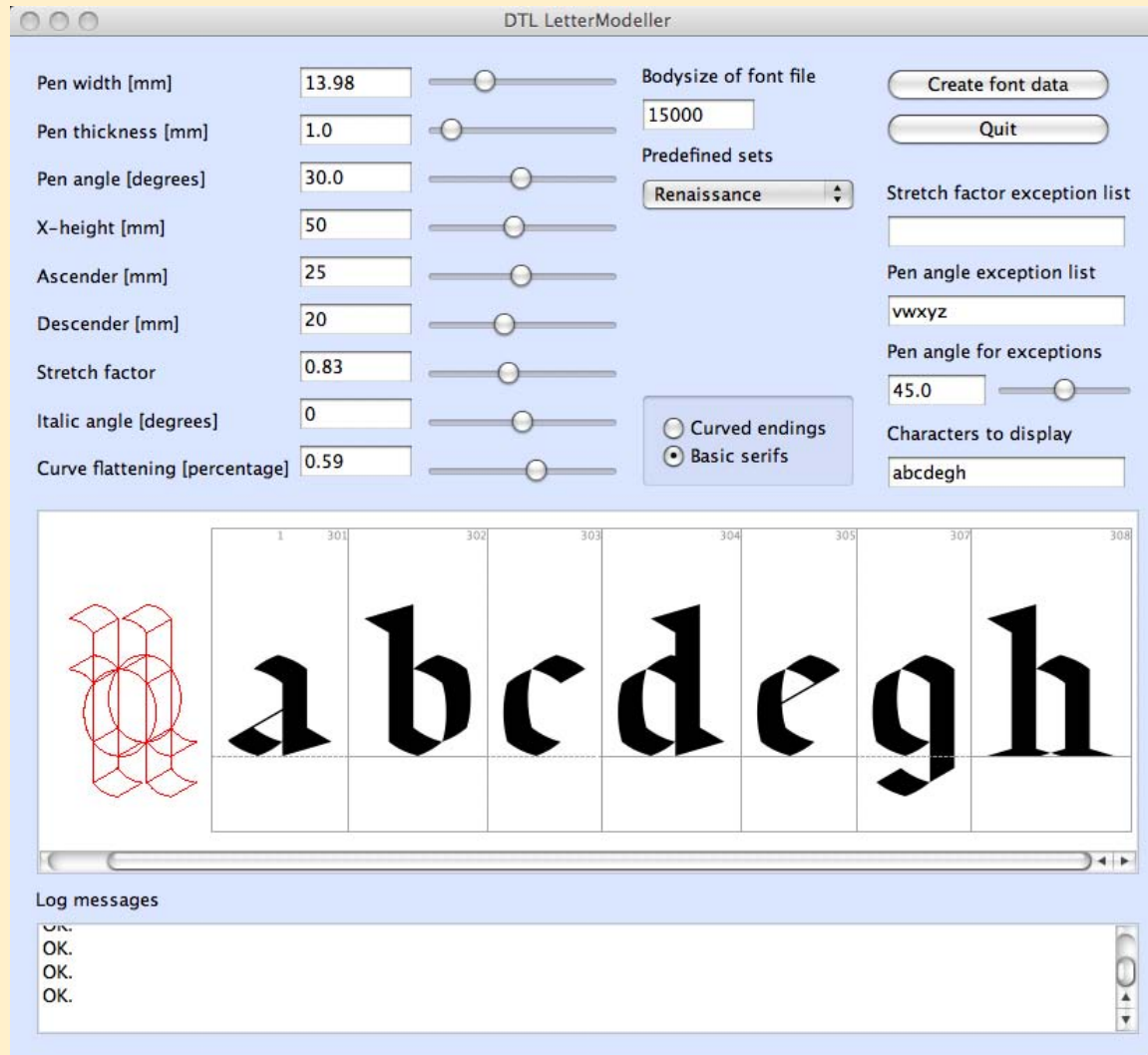
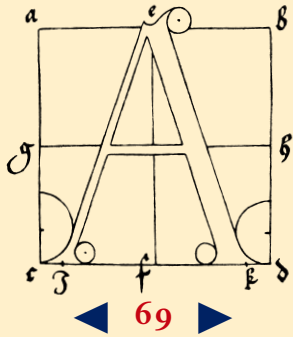
SECT. VIII. *Cautions in reading*

run counter to it; that by in  
felves of Gods will, they may  
exactly how to affront and co  
47. NAY, fo it is, too ma  
add contemt; are not conter  
to resist its Precepts, but def

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- ▶ Music
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- ▶ Idiom
- ▶ Other scripts

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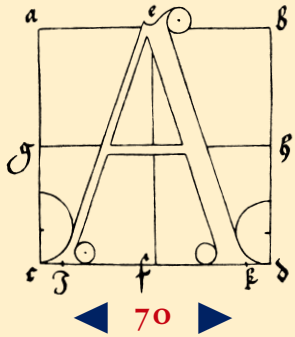
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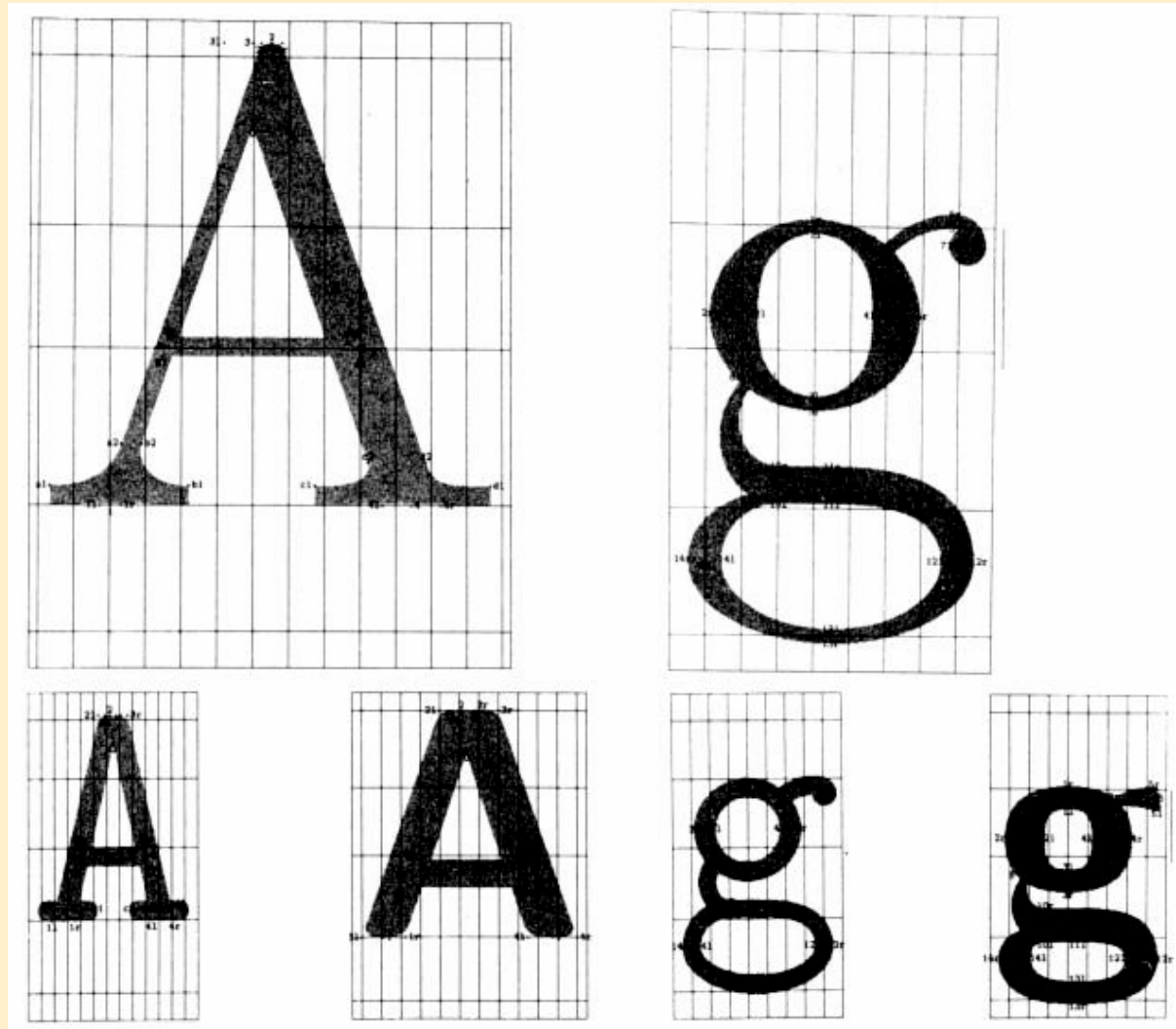
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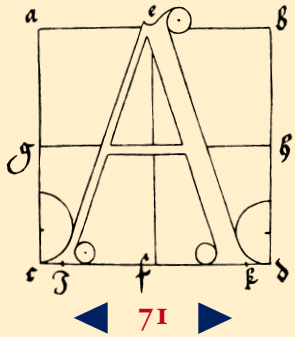


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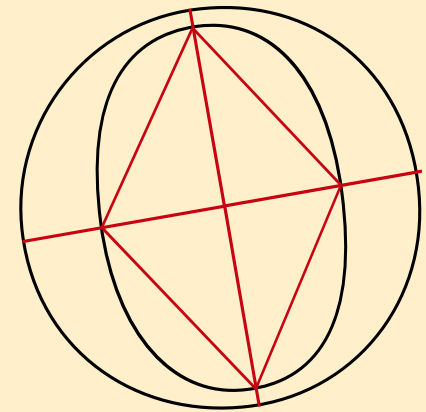
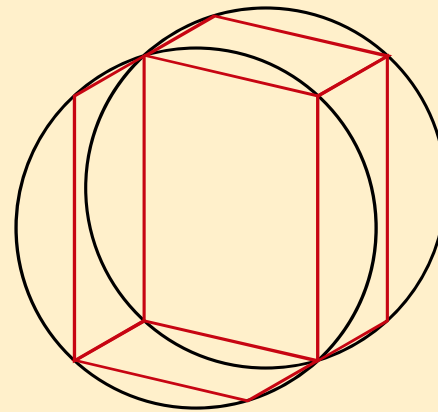
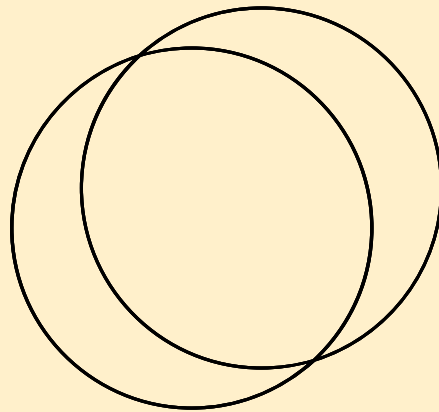
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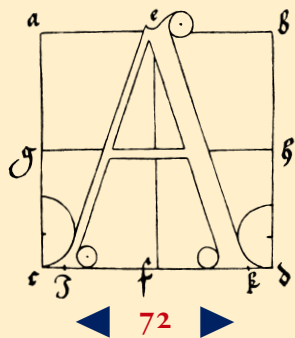
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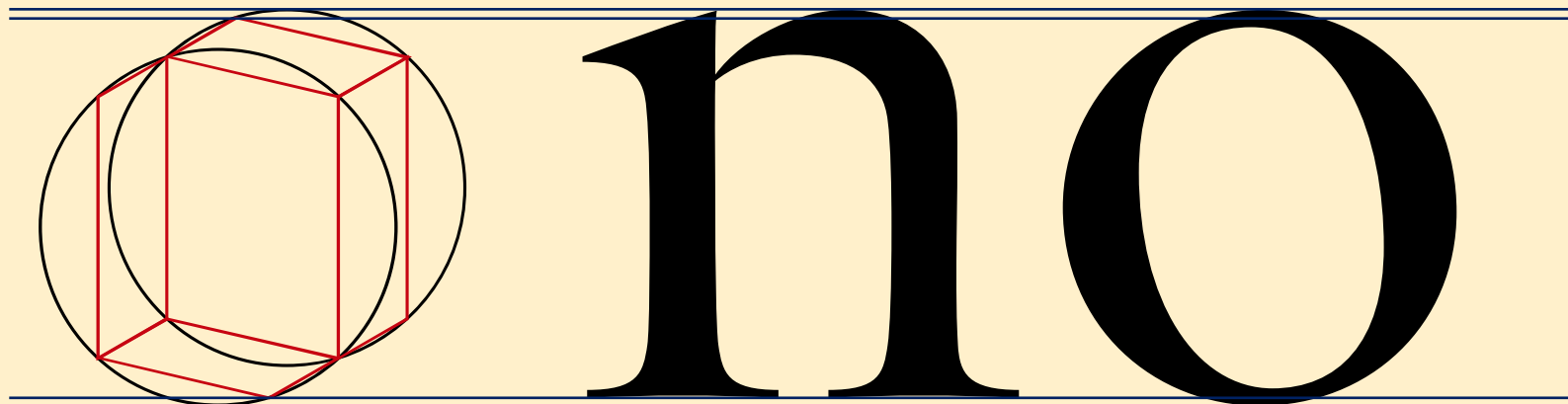


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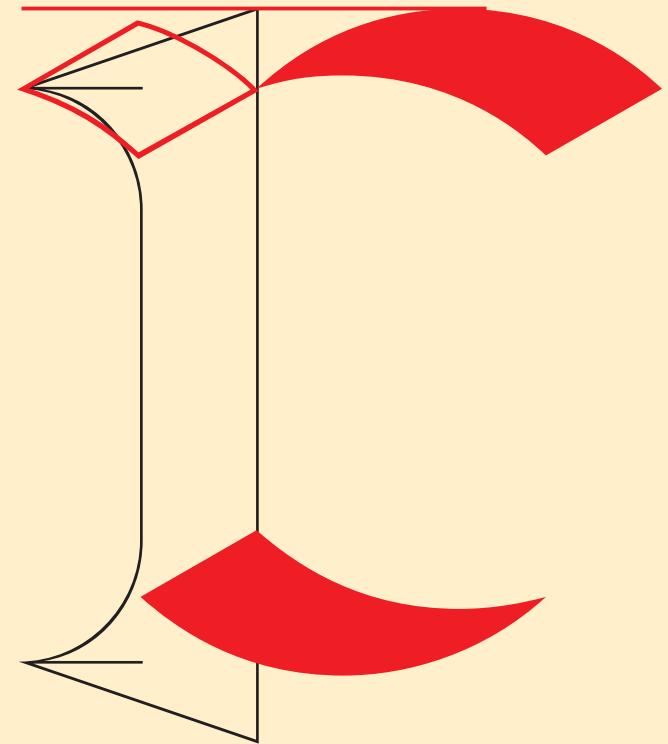
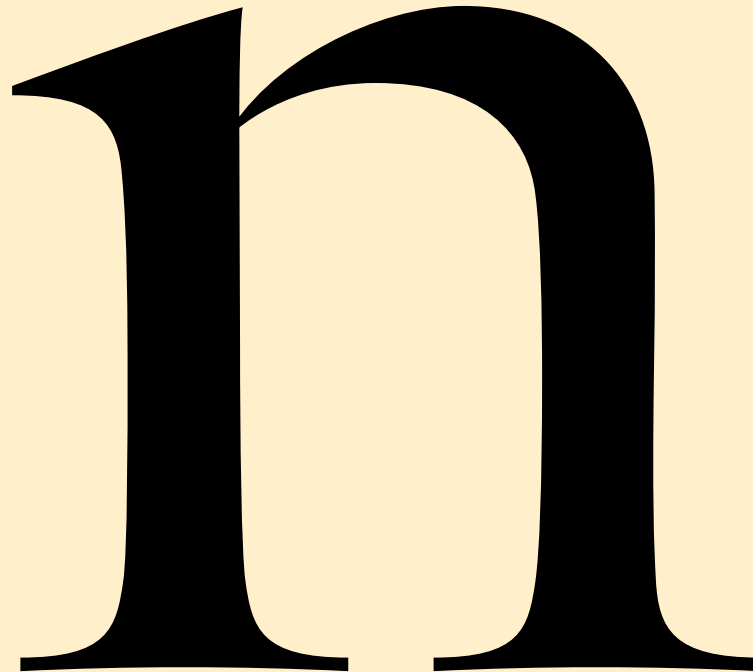
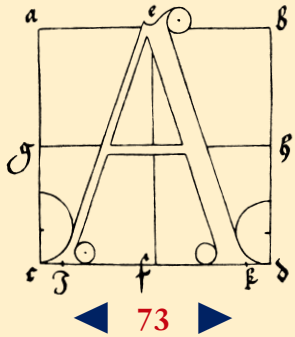




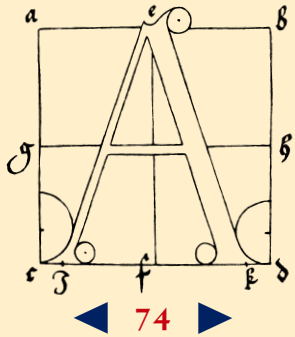
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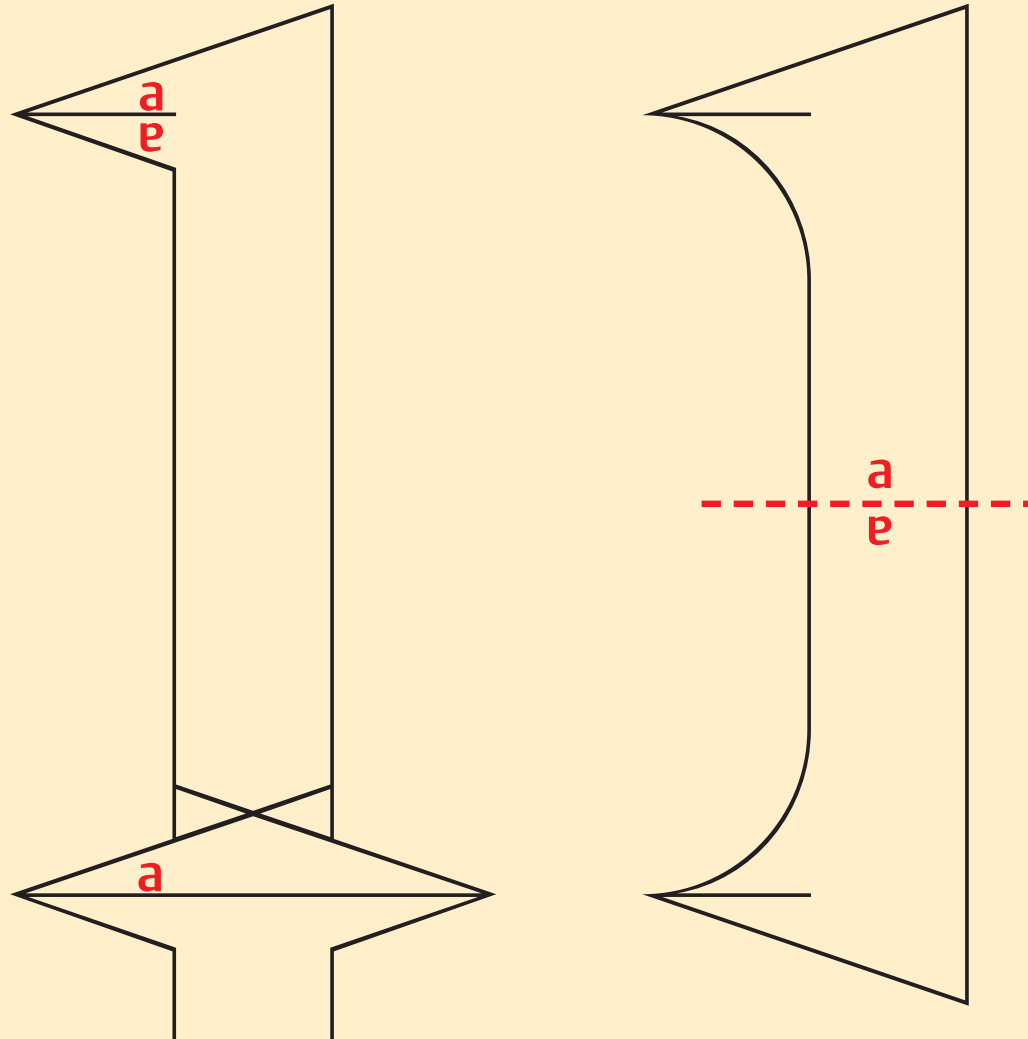




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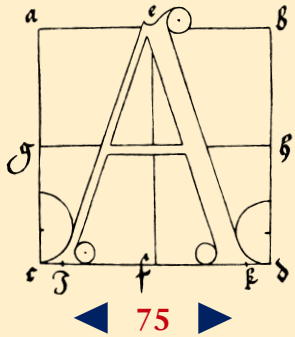


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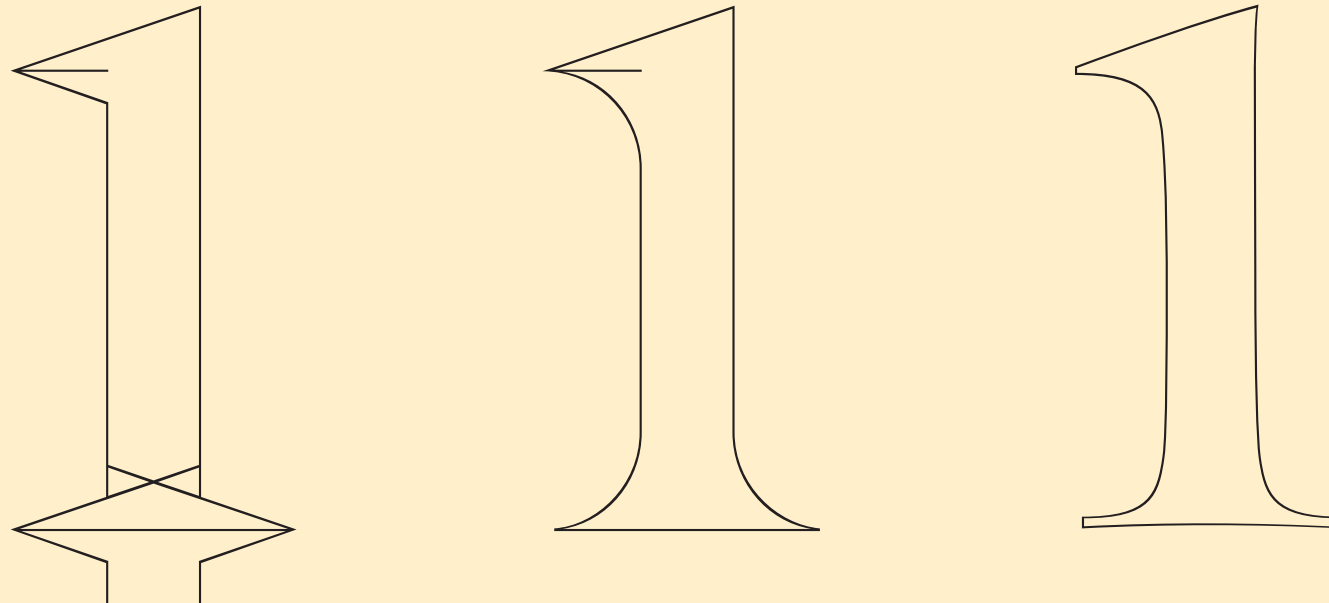
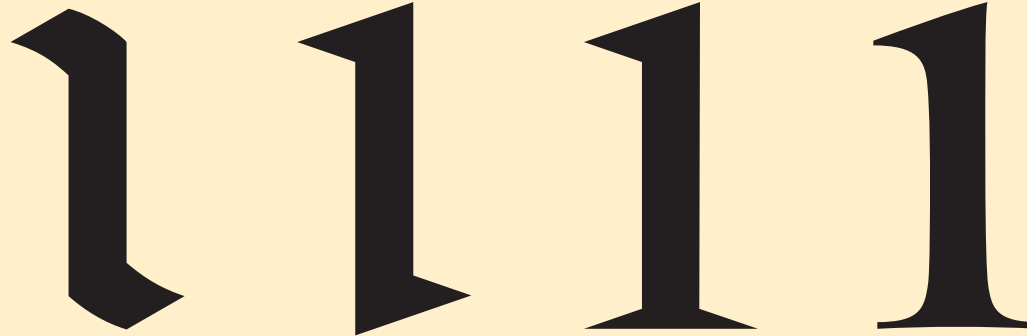


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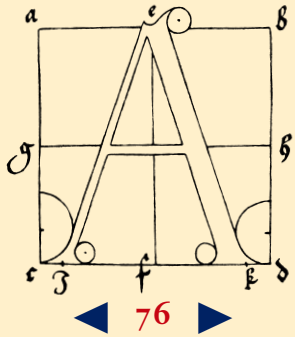


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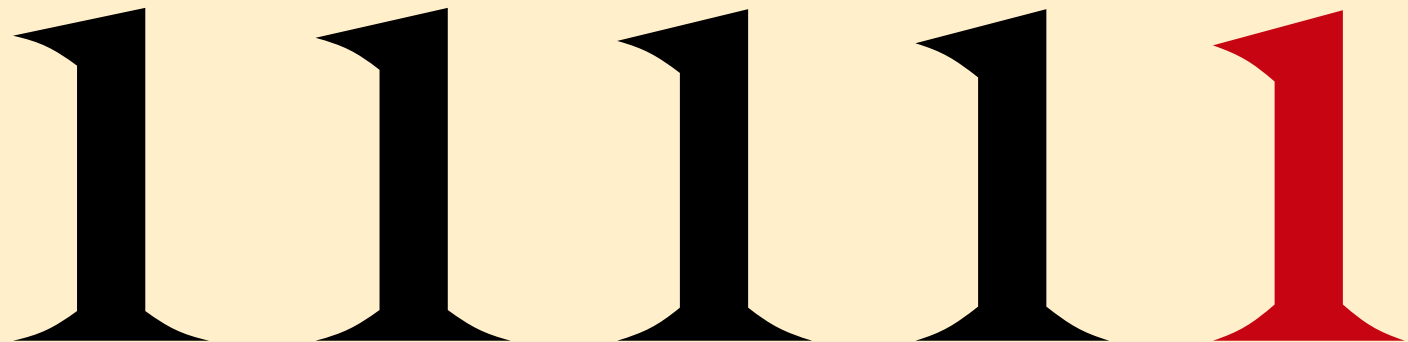
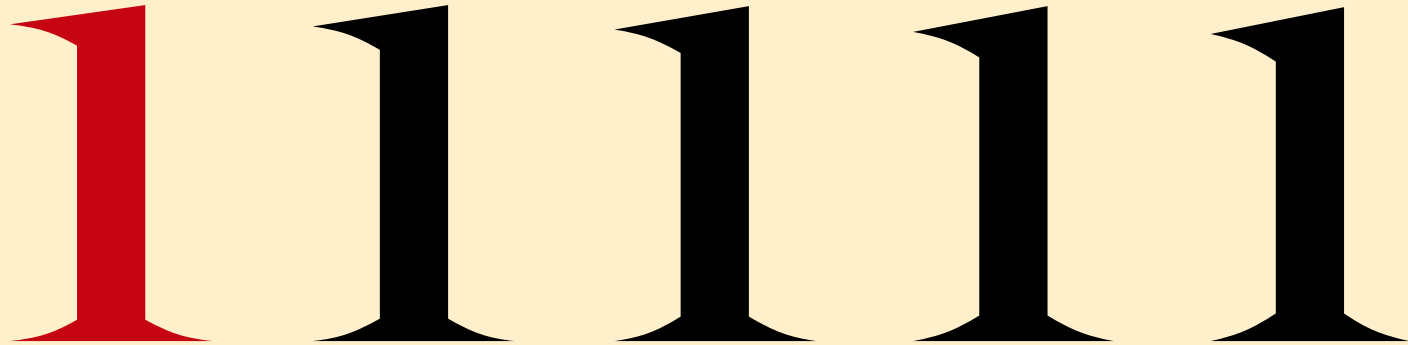
Macro-Micro

LetterModeller

Structurs

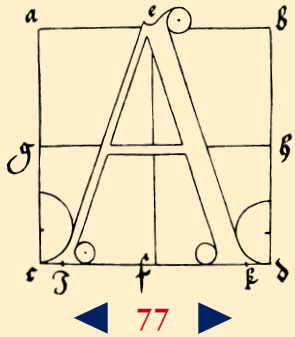
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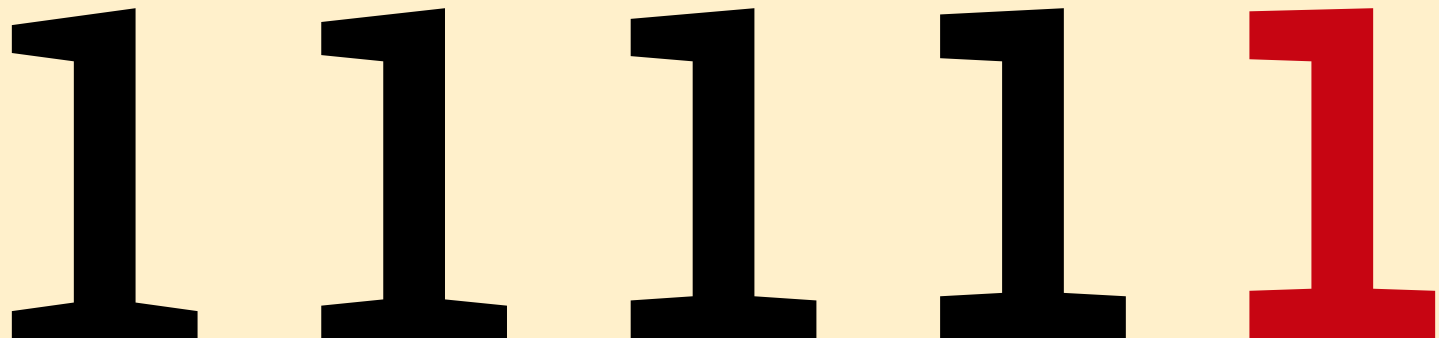
Macro-Micro

LetterModeller

Structurs

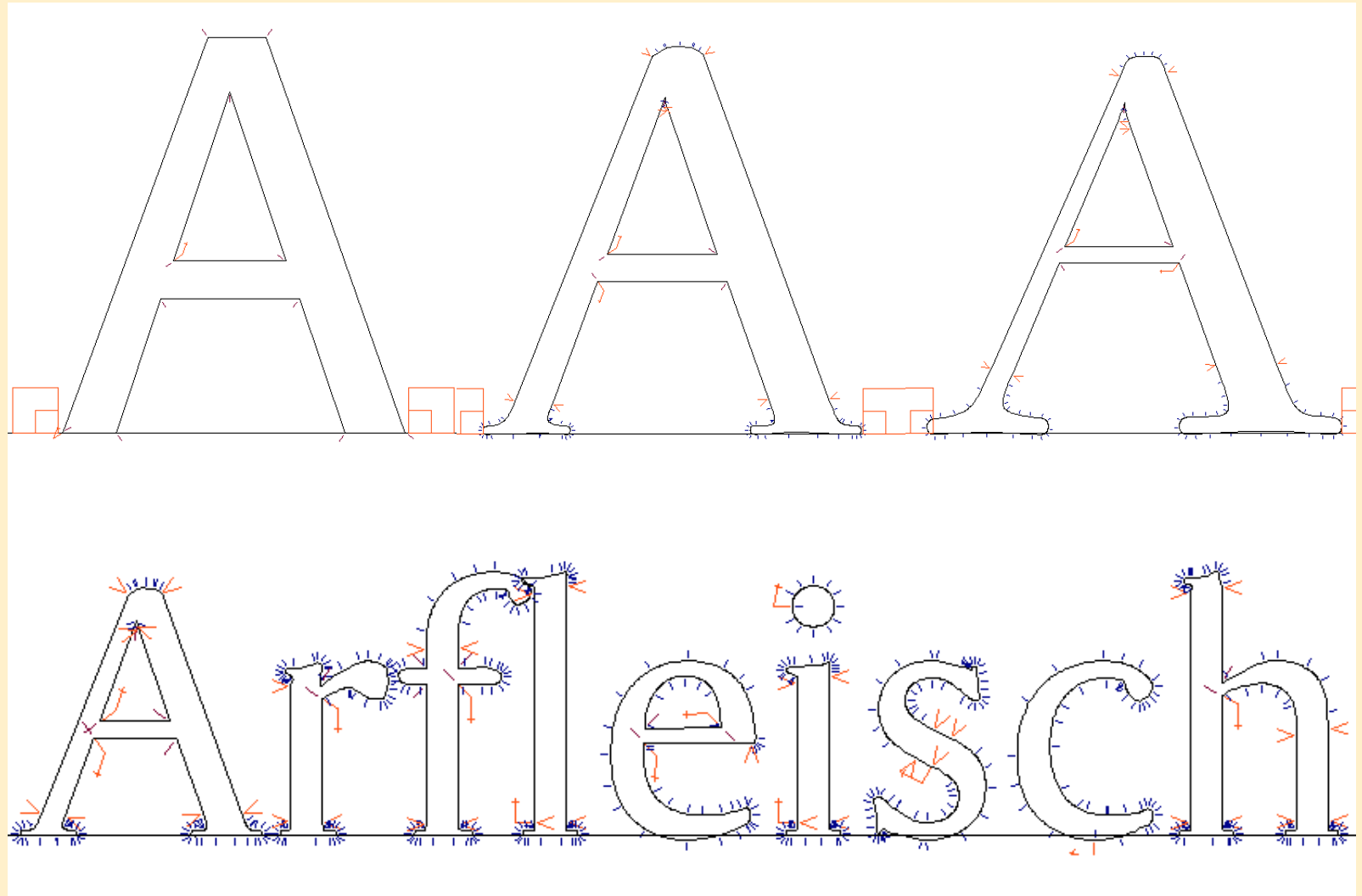
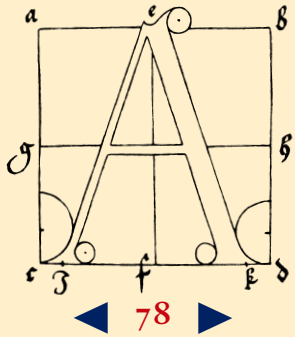
▶ Idiom

▶ Other scripts



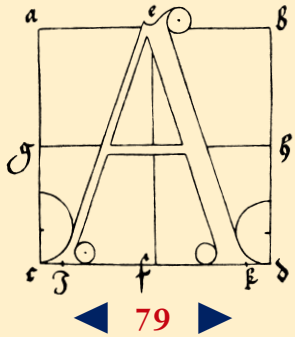
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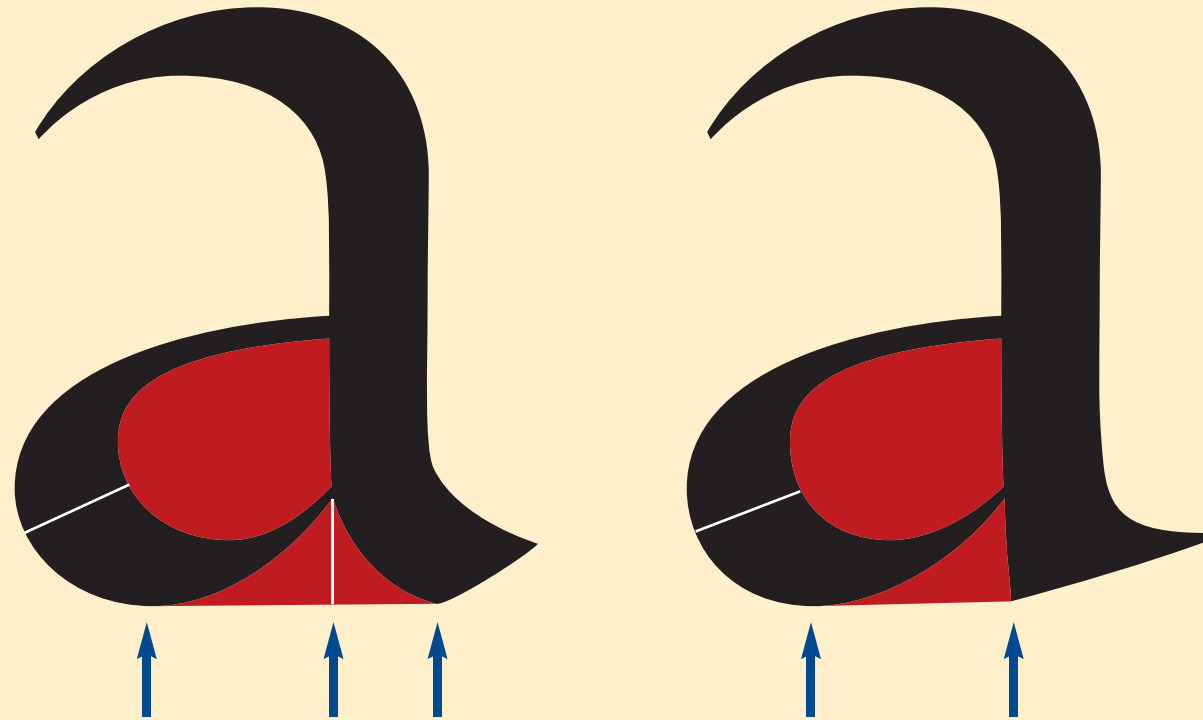


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- ▶ Idiom
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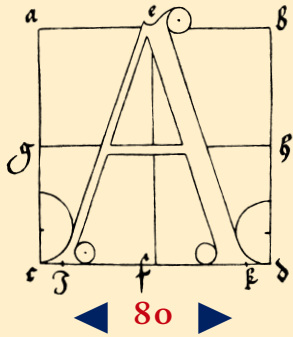


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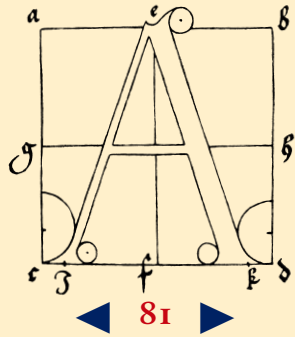
Jan van Krimpen

▶ Other scripts

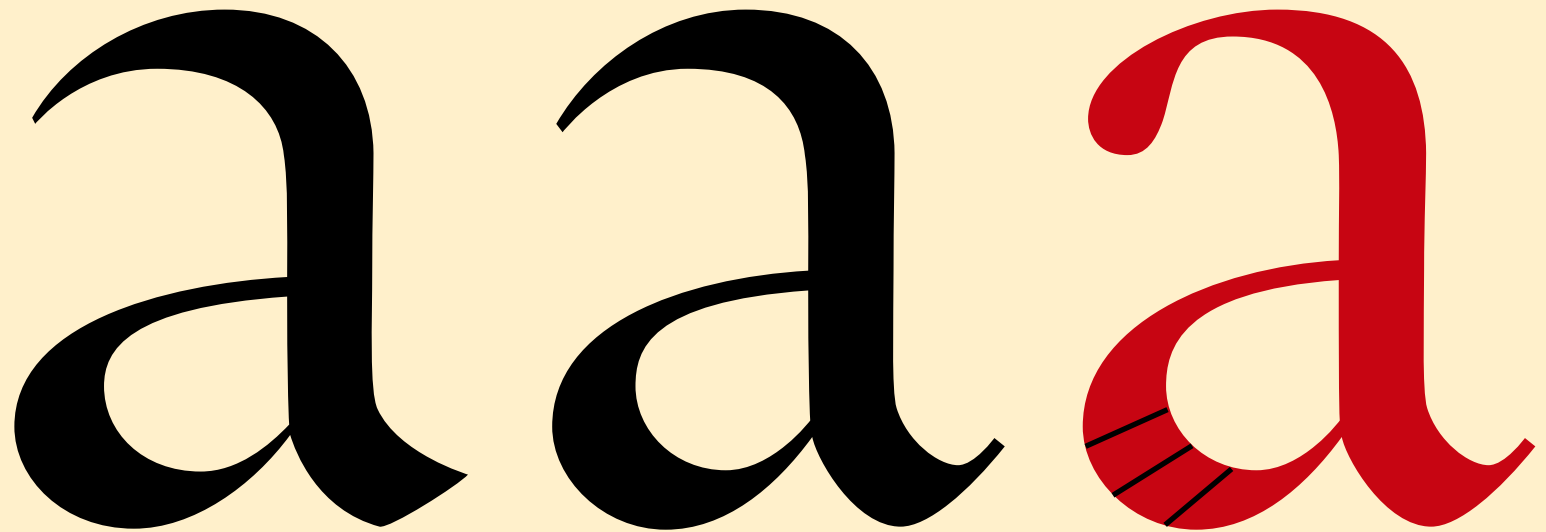


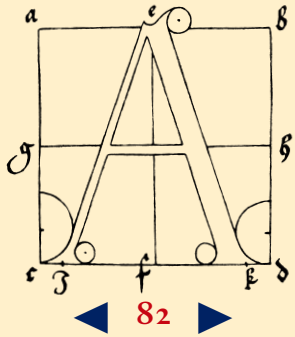
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- ▶ Research
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- ▶ Legibility
- ▶ Music
- ▶ Parameterizing
- ▼ Idiom
  - Jan van Krimpen
- ▶ Other scripts





- ▶ IKARUS and FM
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- ▶ Legibility
- ▶ Music
- ▶ Parameterizing
- ▶ Idiom
- ▼ Other scripts
  - Hangul
  - CJK
  - Systems

medeklinker

기역

syllabe

medeklinker

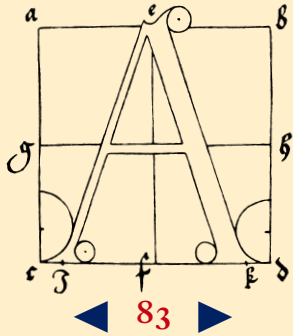
치읓

syllabe

klinker

아

syllabe



- ▶ IKARUS and FM
- ▶ Research
- ▶ Systems
- ▶ Legibility
- ▶ Music
- ▶ Parameterizing
- ▶ Idiom
- ▼ Other scripts
  - Hangul
  - CJK
  - Systems

# 코렐리

Arcangelo Corelli, 1713-1653

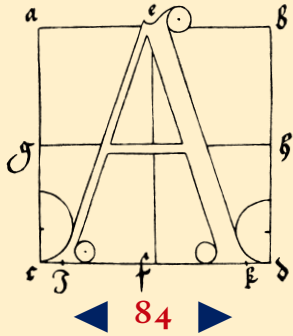
작곡가이면서 당시 명 연주자이기도 했던 코렐리는 또한 바이올린 기술을 혁신적이게 발전 시켰다.

그는 데타체 (Detache;음을 분리하지 않고 항상 부드럽고 균일하게 활을 켜는 것)주법을 완성시켰으며 어려운 이중음과 3중음, 빠른 경과구, 아르페지오, 카덴차 그리고 모토 페르페투오(moto perpetuo; 여러 짧은 음표가 끊임없이 움직이며 처음부터 끝까지 연주되는 것이 특징)에 의한 연습곡풍의 악장으로 주법을 다양하게 발전시켰다.

그의 바이올린 주법과 교습법은 제자였던 로카텔리와 제미니아니등에 의해 발전되어 18세기 대부분의 바이올린 악파의 기초가 되었다.

물론 후대에 이르러 그의 주법이나 기교를 능가하는 바이올리니스트들





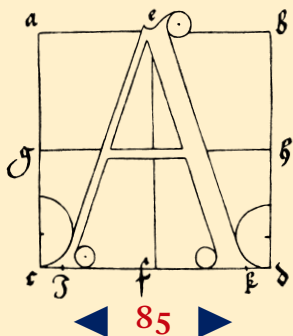
- ▶ IKARUS and FM
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- ▶ Systems
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- ▶ Music
- ▶ Parameterizing
- ▶ Idiom
- ▼ Other scripts
  - Hangul
  - CJK
  - Systems

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Ritme en kleur



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ek - Version 6.0 beta by URW Hamburg (c)

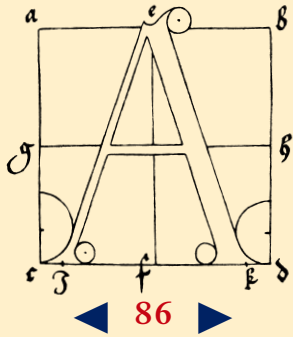
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T:	onna.ii						W: 13711	YMAX: 12246	CN: 5							
E:	0:21162	BACKGROUND	SAVE COMP:	AUTO	SEMI	MANUAL	RSB: 586	TOTW: 15000	*****/*****							
							<b>SEPARATION</b>									
							smf	previous	next							
							X									
							T									
							I									
							P									
							L									
							Automatic									
							info									
							#									
							<b>SELECTION</b>									
							p	co	cg	ch						
							EDIT	IMPRO	MOD	KA	INST	SPEC				
							<b>EDIT</b>									
							quick		undo							
							delete	insert	change label							
							shift	shift hor.	shift ver.							
							shift smooth	quick on co	adj to guide							
							merge	copy	channelize							
							scale	rotate	mirror							
							fit	merge comp.	hidden lines							
							sidebearings	text	typ. header							
							store 1	2	3	4	5	6	7	8	9	10
							paste 1	2	3	4	5	6	7	8	9	10
							<b>DISPLAY</b>									
							reset	zoom +	zoom -	setup						
							measure	marks	numbers	coords						
							fill	perm	compare	shift bg						
							flat curv	inflect.	stems	hide co						
							guides	cp guides	move	edit						
							H guides	V guides	grid	copy bg						

娠	娥	娩	娛	媼	娼	婀
0:23072	0:23077	0:23081	0:23087	0:23093	0:23100	0:23104
婉	婚	婢	婦	姪	婿	媒
0:23113	0:23130	0:23138	0:23142	0:23148	0:23167	0:23186
媚	媛	媪	媽	媾	嫁	嫂
0:23194	0:23195	0:23228	0:23229	0:23230	0:23233	0:23234
嫉	孀	嫌	媿	嫖	嫗	嫡
0:23241	0:23243	0:23244	0:23248	0:23254	0:23255	0:23265
媽	嫦	嫩	嫵	嫵	嬉	嬋
0:23267	0:23270	0:23273	0:23290	0:23291	0:23305	0:23307
嬌	孃	嬪	孀	嬖	嬖	嬖
0:23308	0:23330	0:23338	0:23340	0:23346	0:23350	0:23358

**AUTOMATING TYPE DESIGN PROCESSES**

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ek - Version 6.0 beta by URW Hamburg (c)

A:	9999	FONT_DISPLAY	PREVIOUS	NEXT	SAVE	ORIGINAL	LSB: 410	YMIN: -1758	IK: 101
T:	hg9u,ii						W: 14121	YMAX: 12422	CN: 5
C:	x59f6	BACKGROUND	SAVE_COMP:	AUTO	SEMI	MANUAL	RSB: 469	TOTW: 15000	2439/16613

SEPARATION			
smf	previous	next	
X			
T			
I			
P			
L			
Automatic			
info			
#	13149		

SELECTION					
p	co	cg	ch		
EDIT	IMPRO	MOD	KA	INST	SPEC

EDIT					
quick			undo		
delete	insert	change label			
shift	shift hor.	shift ver.			
shift smooth	quick on co	adj to guide			
merge	copy	channelize			
scale	rotate	mirror			
fit	merge comp.	hidden lines			
sidebearings	text	typ. header			
store 1	2	3	4	5	6
paste 1	2	3	4	5	6

DISPLAY			
reset	zoom +	zoom -	setup
measure	marks	numbers	coords
fill	perm	compare	shift bg
flat curv	inflect.	stems	hide co
guides	cp guides	move	edit
H guides	V guides	grid	copy bg

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- ▶ Legibility
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  - CJK
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