Legacy software creator’s perspective: SWHAP

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Carlo Montangero
Former professor of the University of Pisa
Why am I here?
What did I do with SWHAP?

• Two collections/curations: Softi (1968) and MAGMA-Lisp (1973-81)

• Commonalities
  • Raw materials on paper
  • Few versions: 4 and 1, respectively
  • FORTRAN as a programming language

• Differences
  • Size: less than 100, more than 2000 (out of 10k)
  • Homogeneity
  • Complementary materials
  • My personal experience
Softi (1968)

- Exercise
  - in using the CEP

- Documents
  - printed by this tty
  - Stored in the Comp. Mach. Museum in Pisa
Softi (1968)

- Exercise
  - in numerical analysis
  - smoothing of a curve
  - by Tonina Starita
- 3 programming languages
  - FORTRAN CEP
  - CEP assembly language
  - command language

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```plaintext
GFC.Softi.F1596.29/3/68.Starita
SOFTING DI UNA CURVA
#NB=0
#CALL LETT(KFI,NB)
#READ 0,DELT,AK,N
#DO 5 L=1,N
5#READ 0,TAU(L)
```
Softi (1968)

- FORTRAN:
  - 4 versions recovered
- some arbitrariness:
  - versions 2 - the printout
  - and 3 – handwritten
- No OCR
  - Just typed in

• “machine language” for AI
• generalized *apply:*
  • fn args
  • environment
  • return point
  • state
• more general search strategies

- What has been saved?
- out of ~10k FORTRAN lines
  - 2300 implementing the control features
  - 770 implementing the garbage collector
- Primitive workshop
- Usage
  - teaching
  - ND-Lisp
  - computational linguistics

- Maria Simi: garbage collector
- Giuliano Pacini, Franco Turini and myself: control features
- Listing saved by Franco
  - dated 15/10/1981
- Saved as version 6.0
  - based on “conceptual” reconstruction
Concerns to address

• Redundant Metadata
  • Items, Actors for humans
  • Codemeta for machines
  • Commit for git
    • Automation?

• Address ahead the problem of text recognition
Concerns to address

• Refine authorship attribution
  • Different authors per different version
  • Vs
  • Different authors in the same version

• Raise the abstraction level
  • MAGMA-Lisp vs ND-Lisp
  • SWHAP support vs ???
  • A checklist?
Thank you for your attention! Any question?