

# AniMatrix

## A Matrix-Based Visualization of Software Evolution

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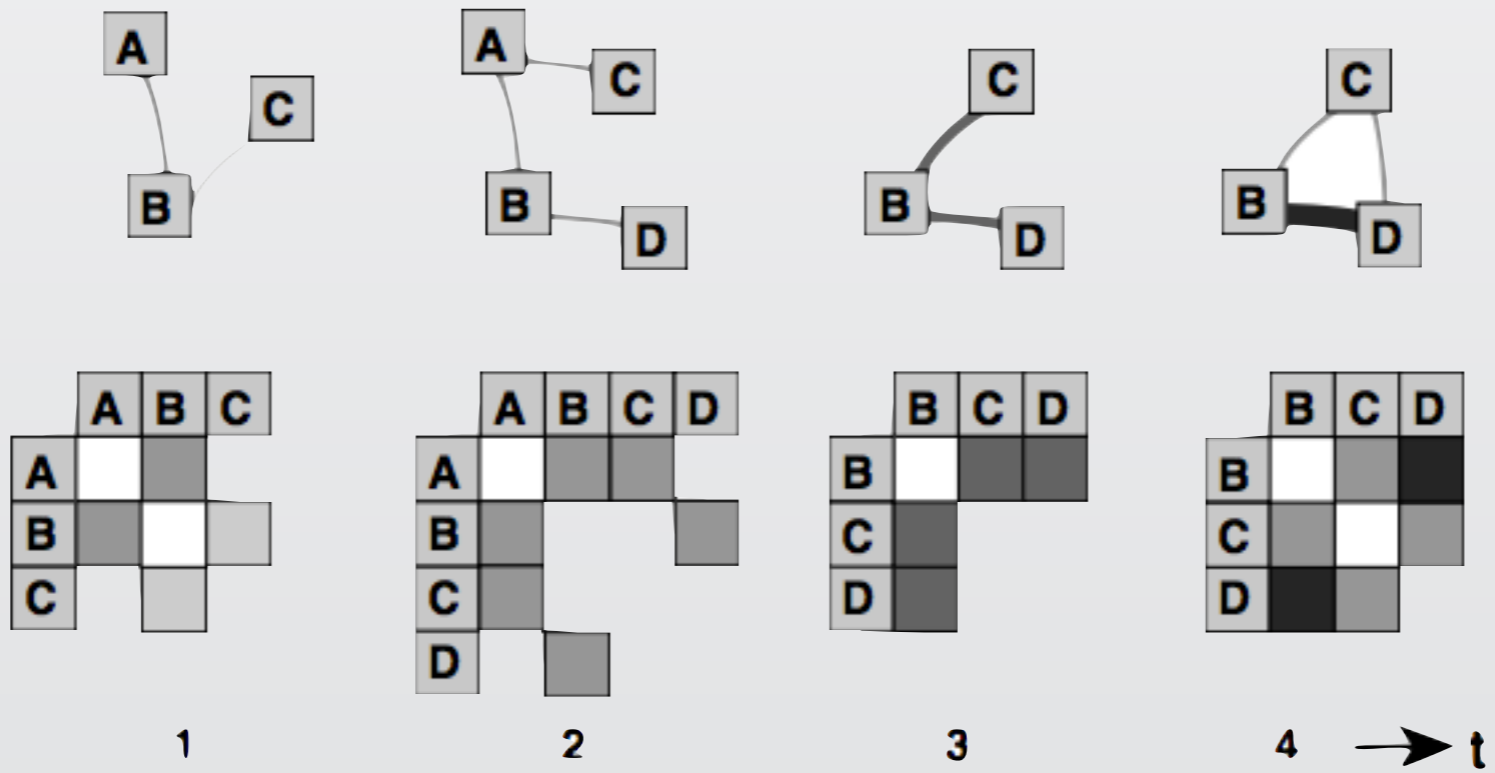
# Problem

- Software changes over time
- Hard to keep track of those changes
- Software engineers need tools to analyse it

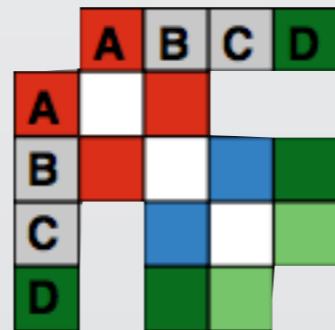
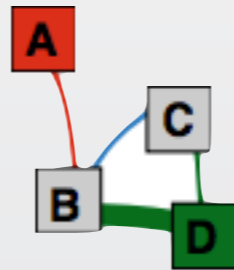
# Technique Taxonomy

- Small Multiples
- Difference Maps
- Animations
- Glyphs

# Small Multiples

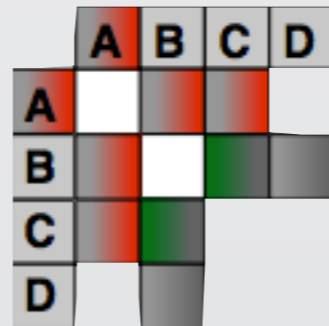
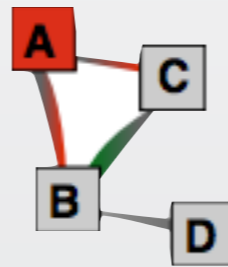


# Difference Maps

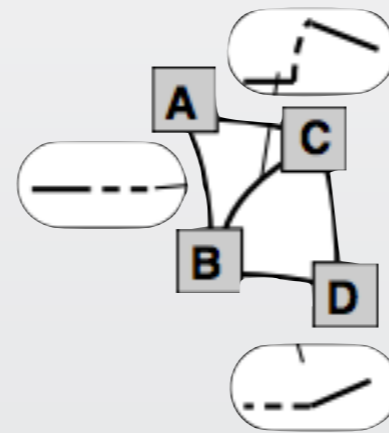


1-4

# Animations

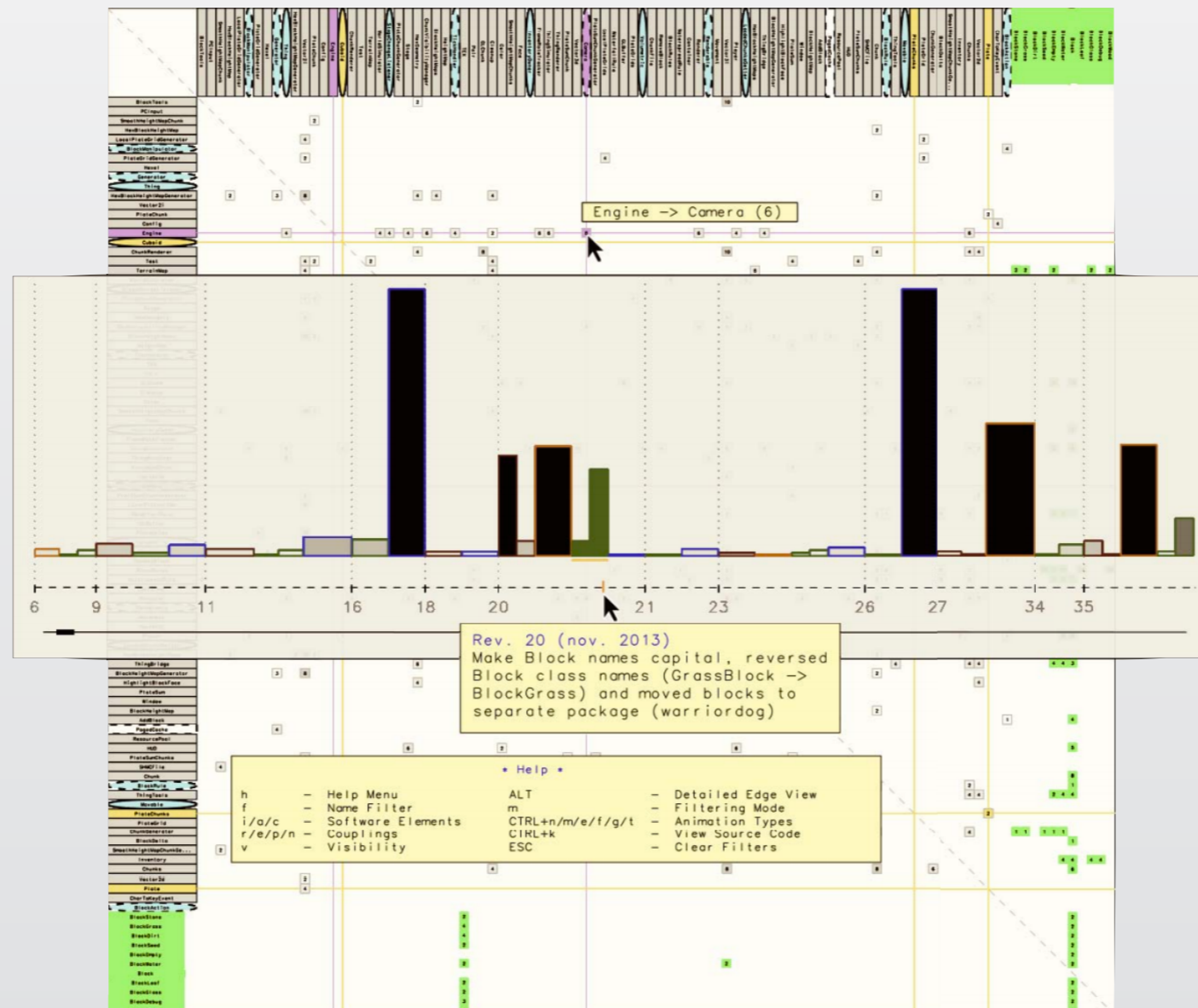


# Glyphs



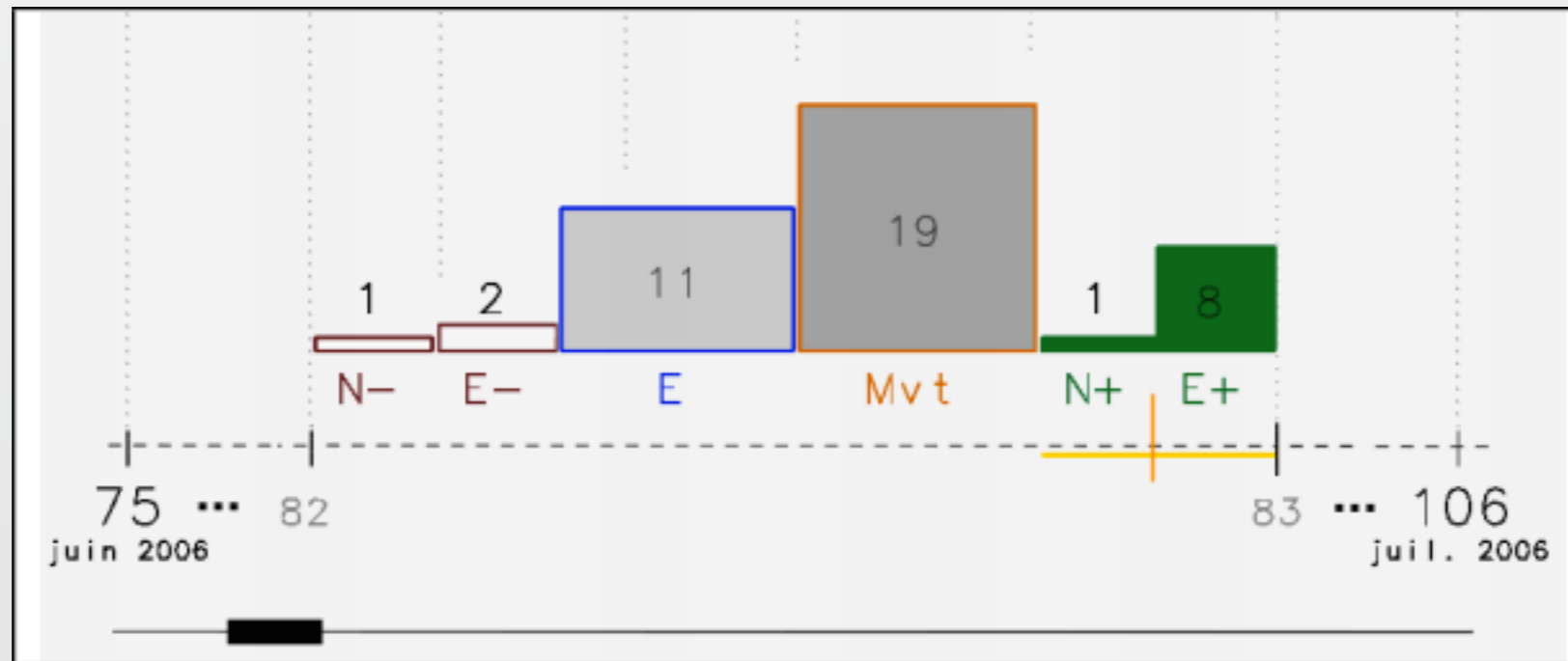
	A	B	C	D
A				
B				
C				
D				

# Animatrix





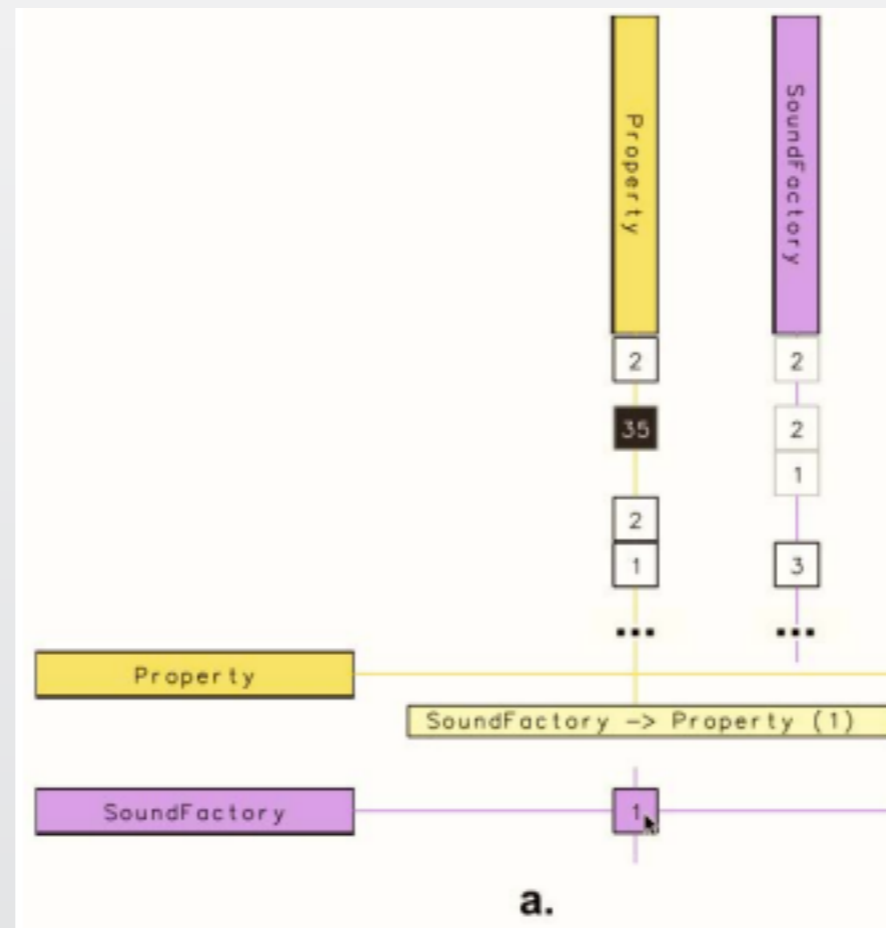
# History Navigator



# History Navigator

- Show changes between revisions
- Color indicate the type of change
- The orange line indicates the position in the animation step

# Matrix View



# Matrix View



# Matrix View

- Show the difference map of the current revision
- Allows to identify Usage, Design Stability and Restructuring of the software.

# Strengths

- Allows to easily identify anomalies in the evolution
- The History Navigator provides a way to quickly identify when the software changed
- The use of glyphs in the matrix allows an in-depth analysis

# Weaknesses

- Hard to compare two revision if they are not consecutive
- Lack of small multiples prevents to observe multiple difference at the same time
- Key-binds are not intuitive.

# Thank you

