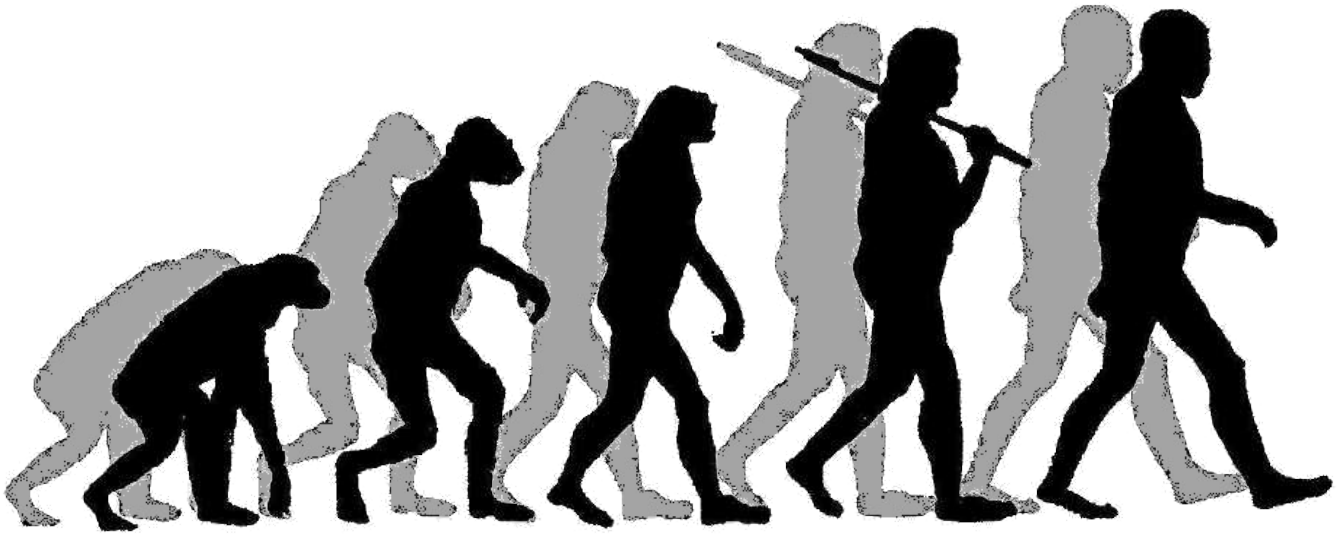
Evolution of Near-Miss Clones



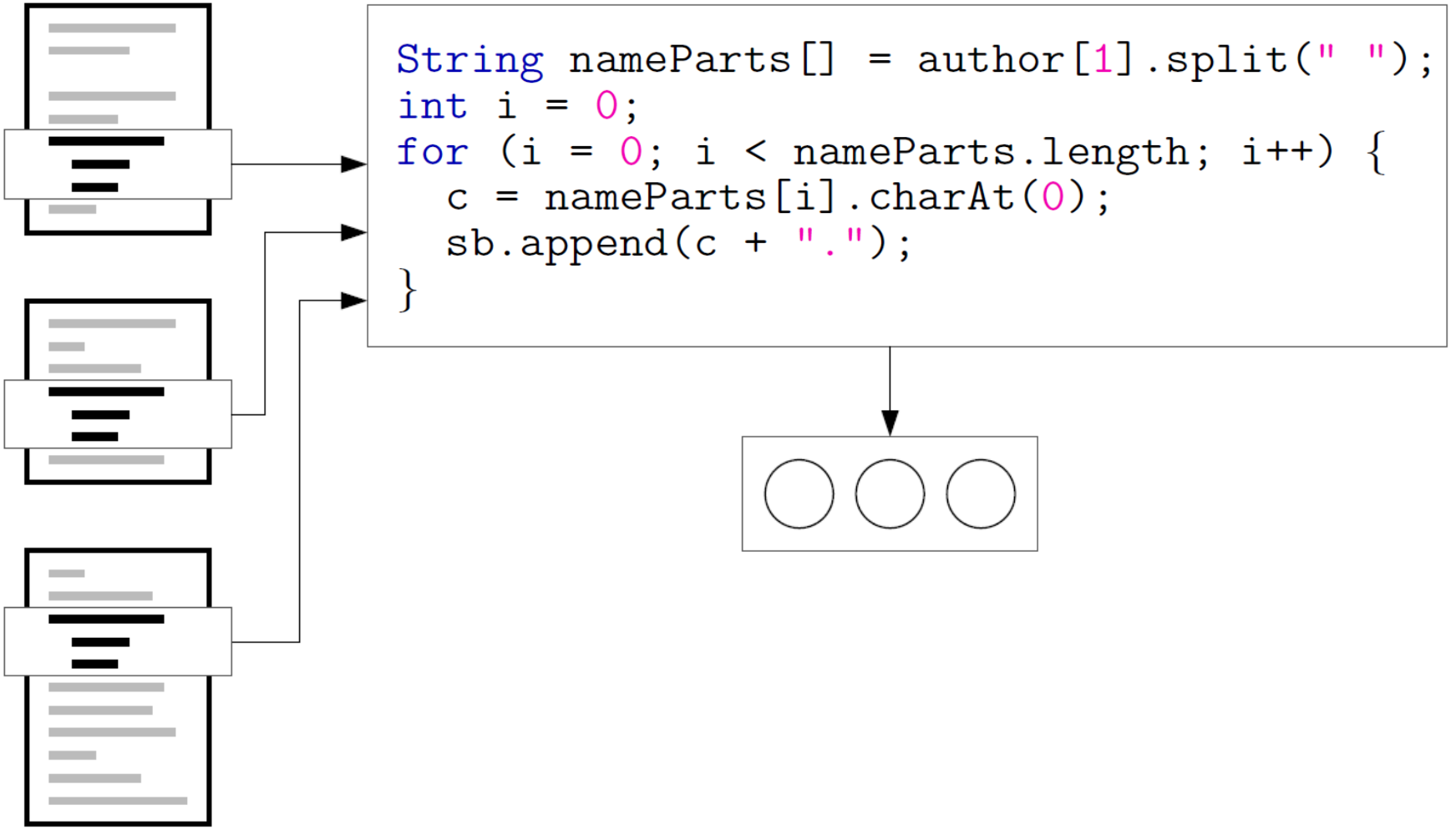
Saman Bazrafshan

12th IEEE International Working Conference
on Source Code Analysis and Manipulation

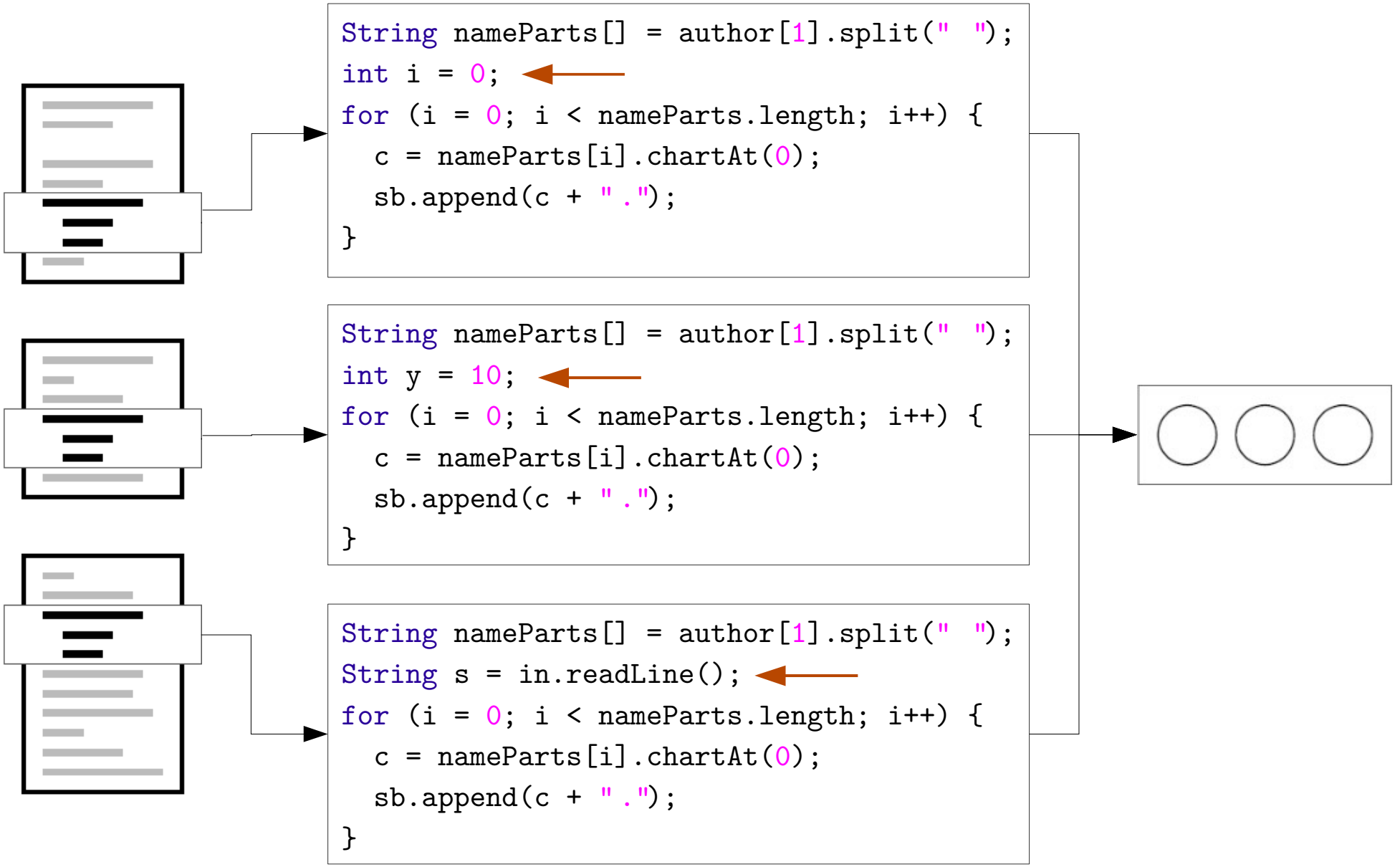
September 23th 2012

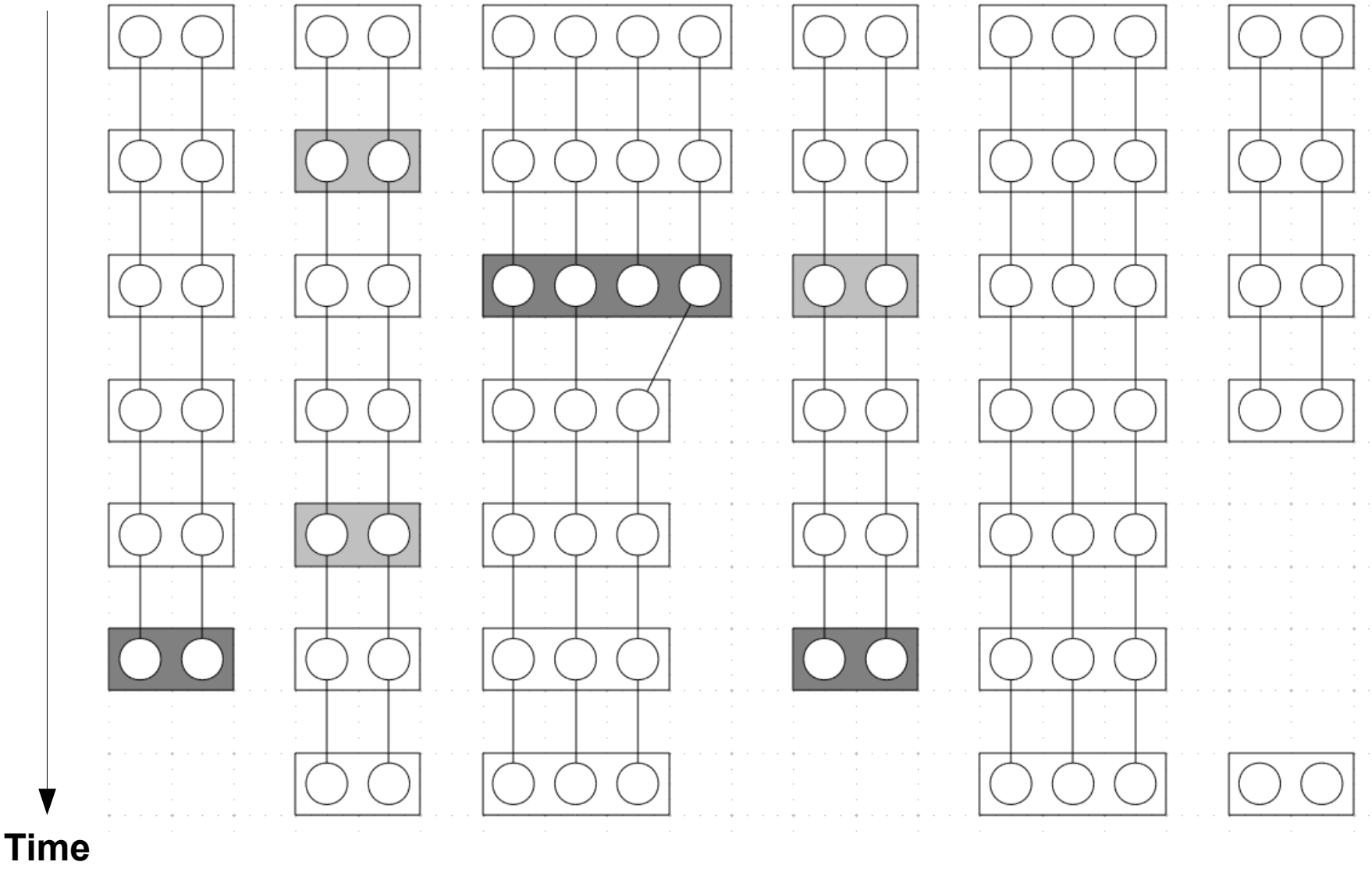
Universität Bremen

Identical Clone



Near-Miss Clone




Time

Göde's study

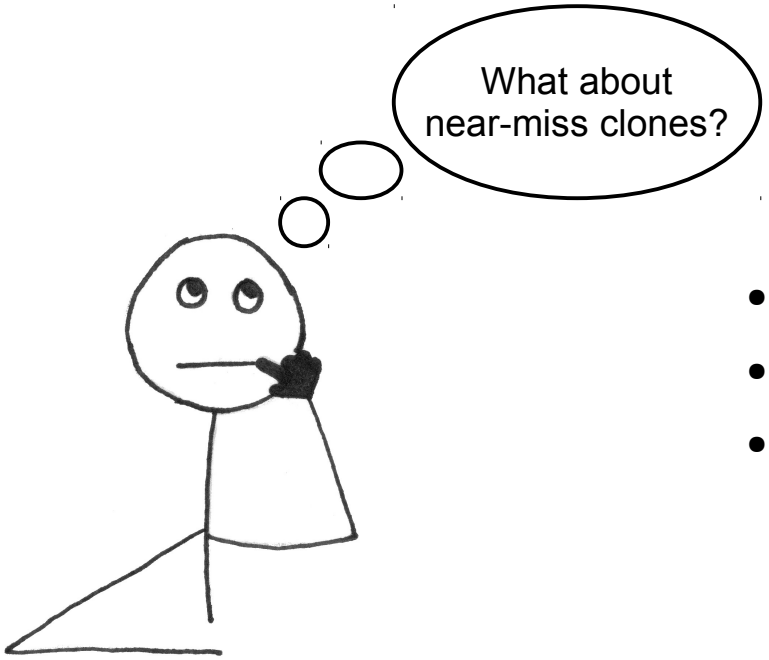
“Evolution of Type-1 Clones” (SCAM 2009)

“Irregularities in clone evolution can help to differentiate the potentially harmful from the less interesting clones.”

Göde's study

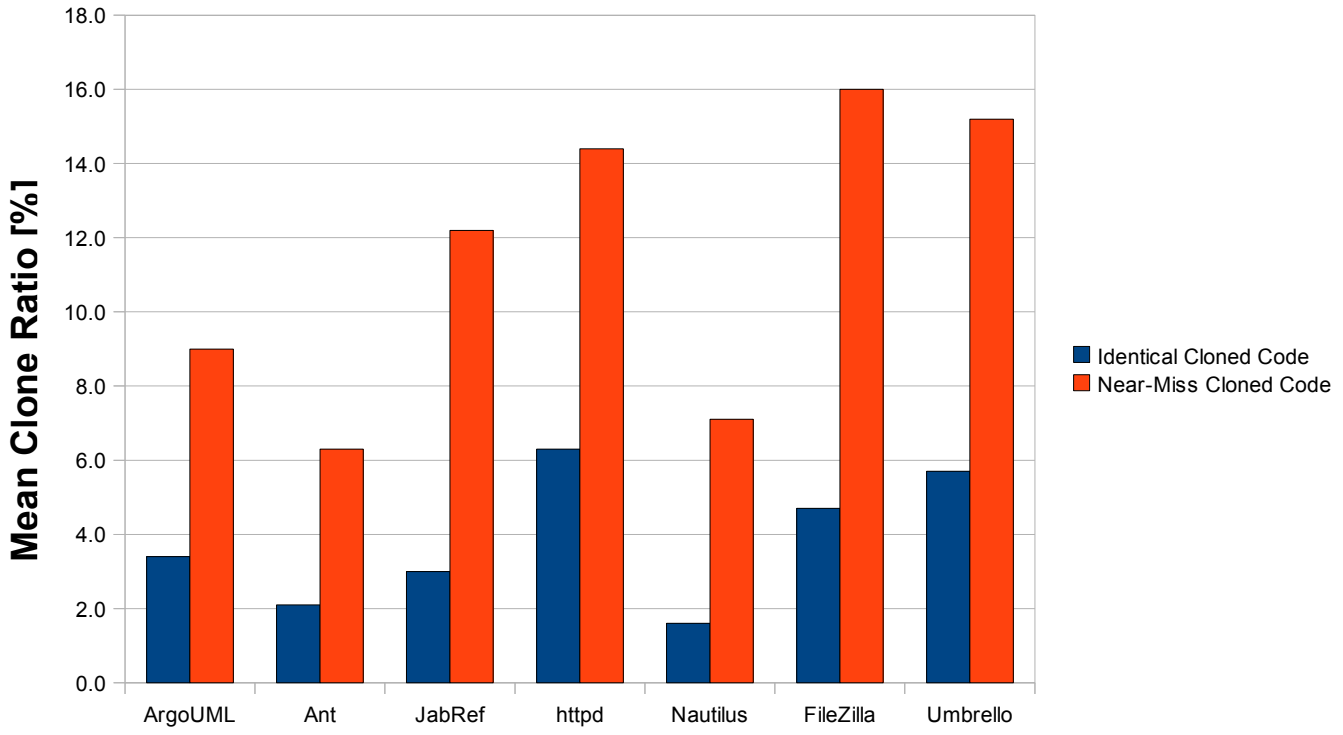
"Evolution of Type-1 Clones" (SCAM 2009)

"Irregularities in clone evolution can help to differentiate the potentially harmful from the less interesting clones."

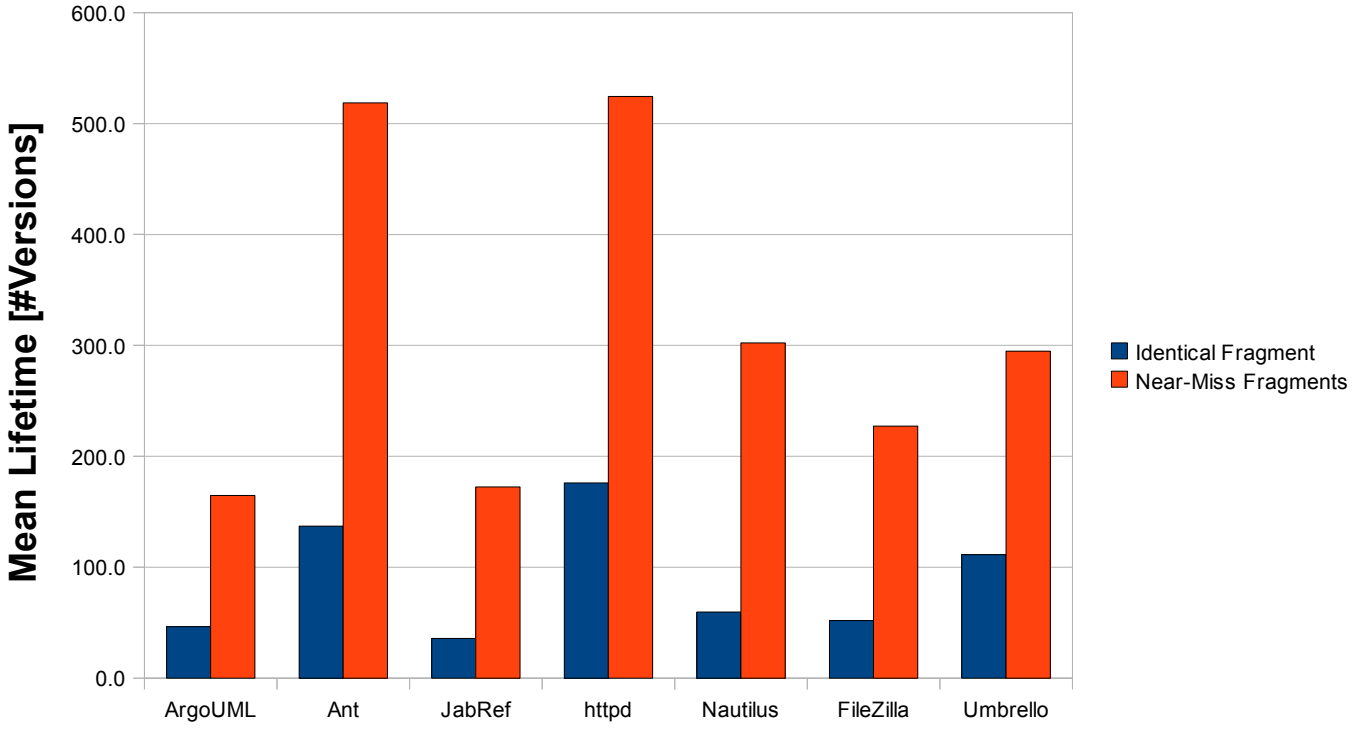


- Analyzed 7 subject systems
- 3 programming languages
- 4 year period (daily snapshots)

1. Which clone type has more impact on the clone ratio?



2. Which clone type is more persistent?



	ArgoUML	Ant	JabRef	httpd	Nautilus	FileZilla	Umbrello
Total Number Versions:	**1212**	**1181**	**660**	**1222**	**986**	**936**	**1401**

3. How frequent do identical clones change into near-miss clones and vice-versa?

	ArgoUML	Ant	JabRef	httpd	Nautilus	FileZilla	Umbrello
Near-Miss to Identical	44	3	8	18	2	5	8
Identical to Near-Miss	19	8	13	29	4	10	8

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```
if (nameParts.length > 0)
  nameParts[i] = sb + ".";
```

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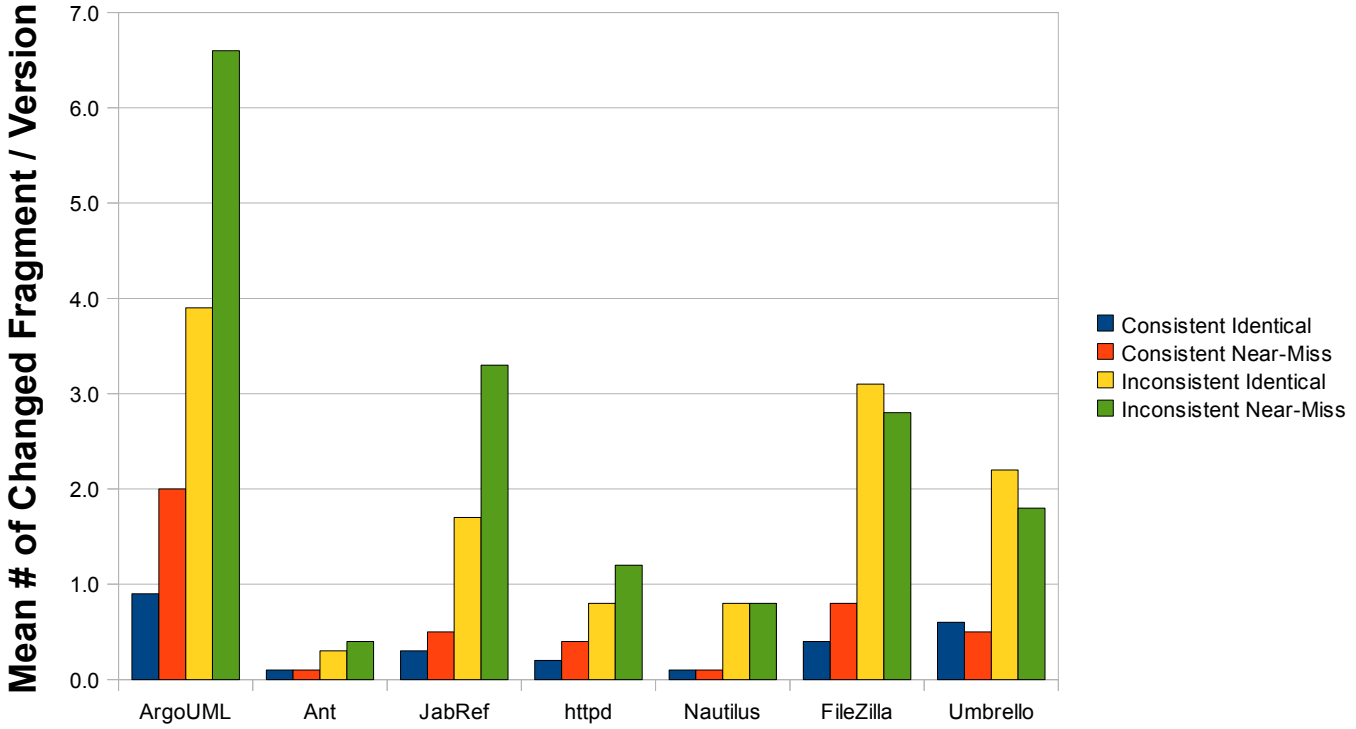
  nameParts[i] = sb + ".";
}
```

4. Which clone type is changed more frequently (consistently / inconsistently)?



“Evolution of Near-Miss Clones”

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Questions?

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