Idiomas e Binding Time Flexível

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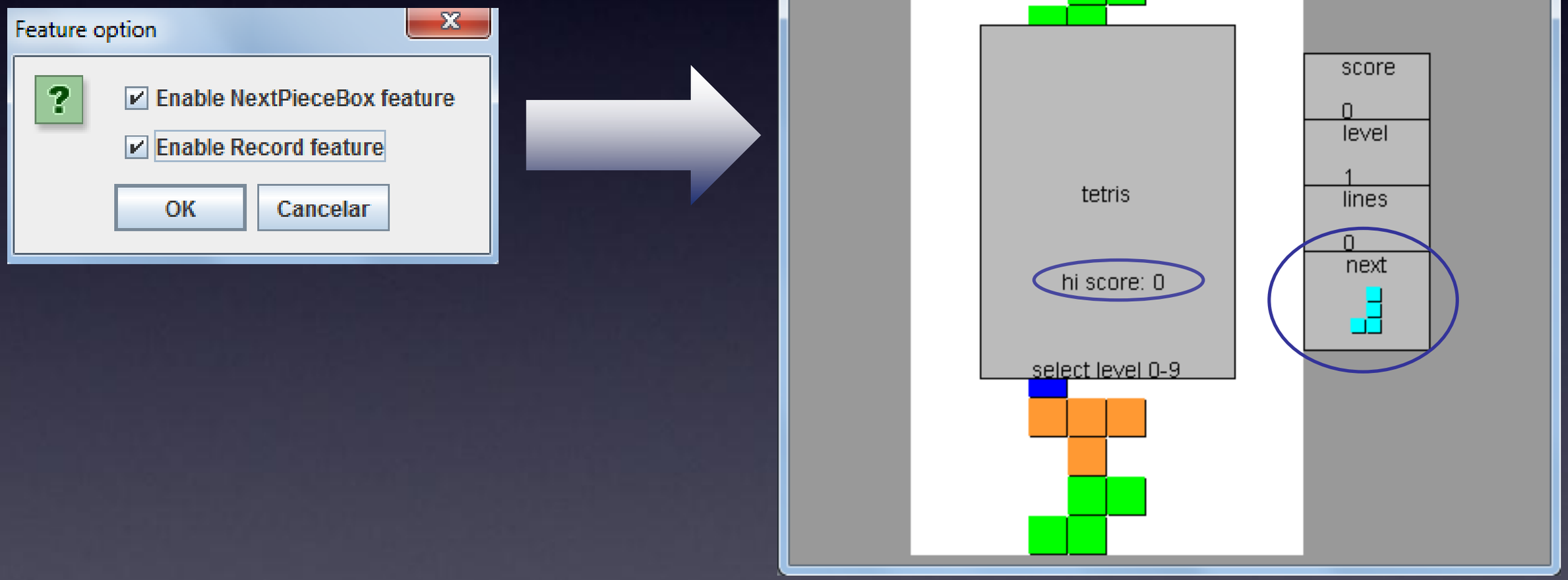
Requisitos específicos para cada cliente

Binding Time Dinâmico



Binding Time Estático

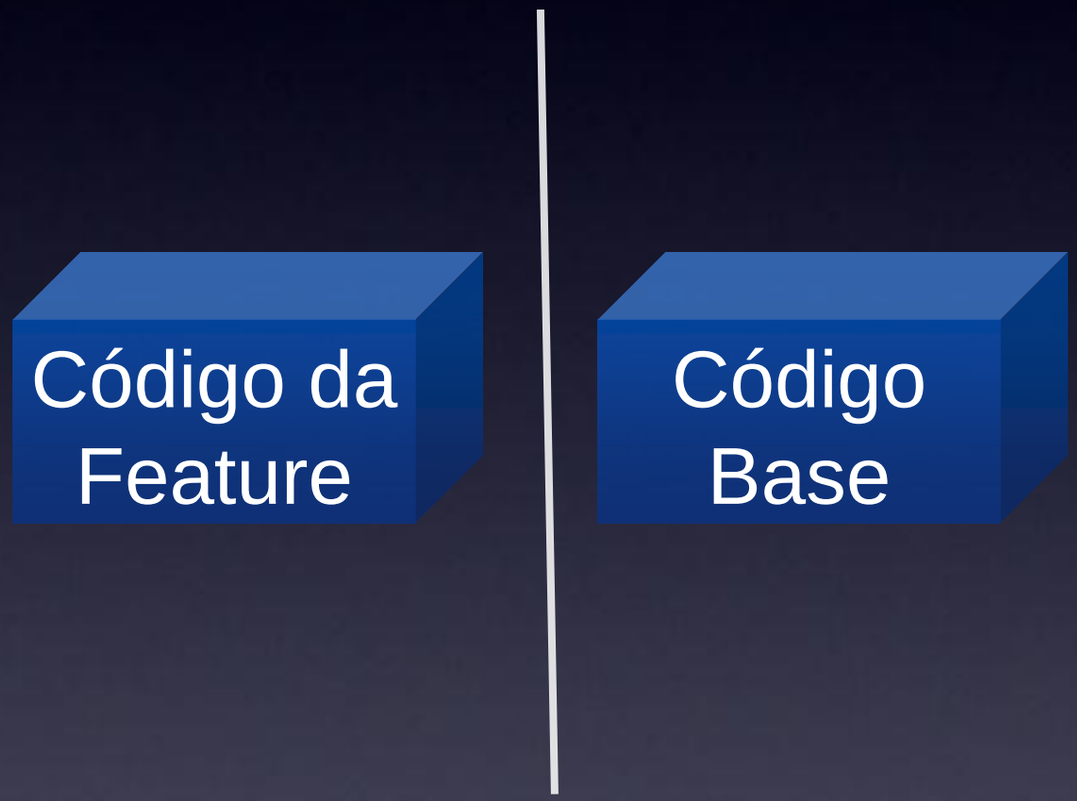
Como implementá-lo?

Identificação do concern

Prune Dependency

“*A program element is relevant to a concern if it should be removed, or otherwise altered, when the concern is pruned from the system*”

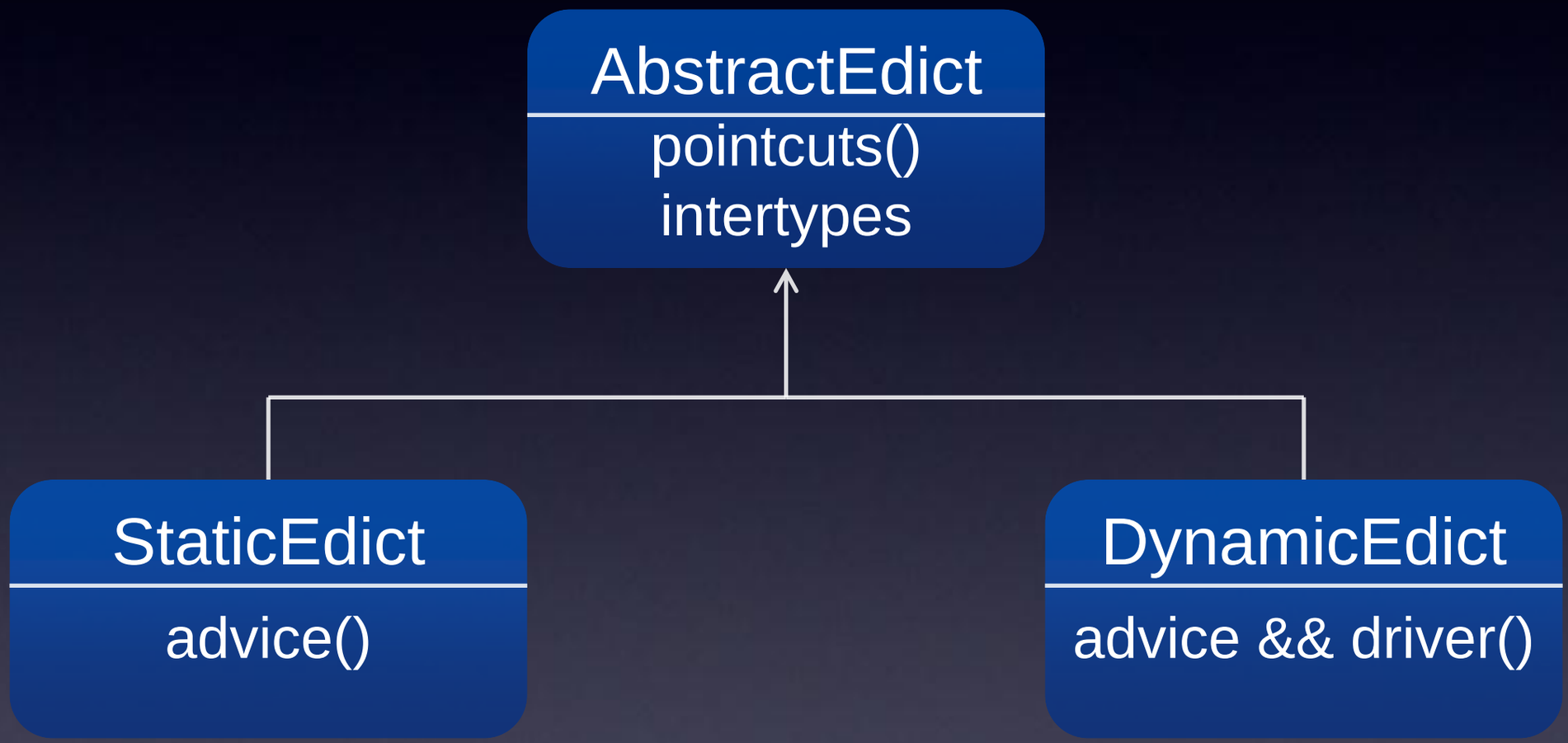
Features modularizadas



Idioma Edicts

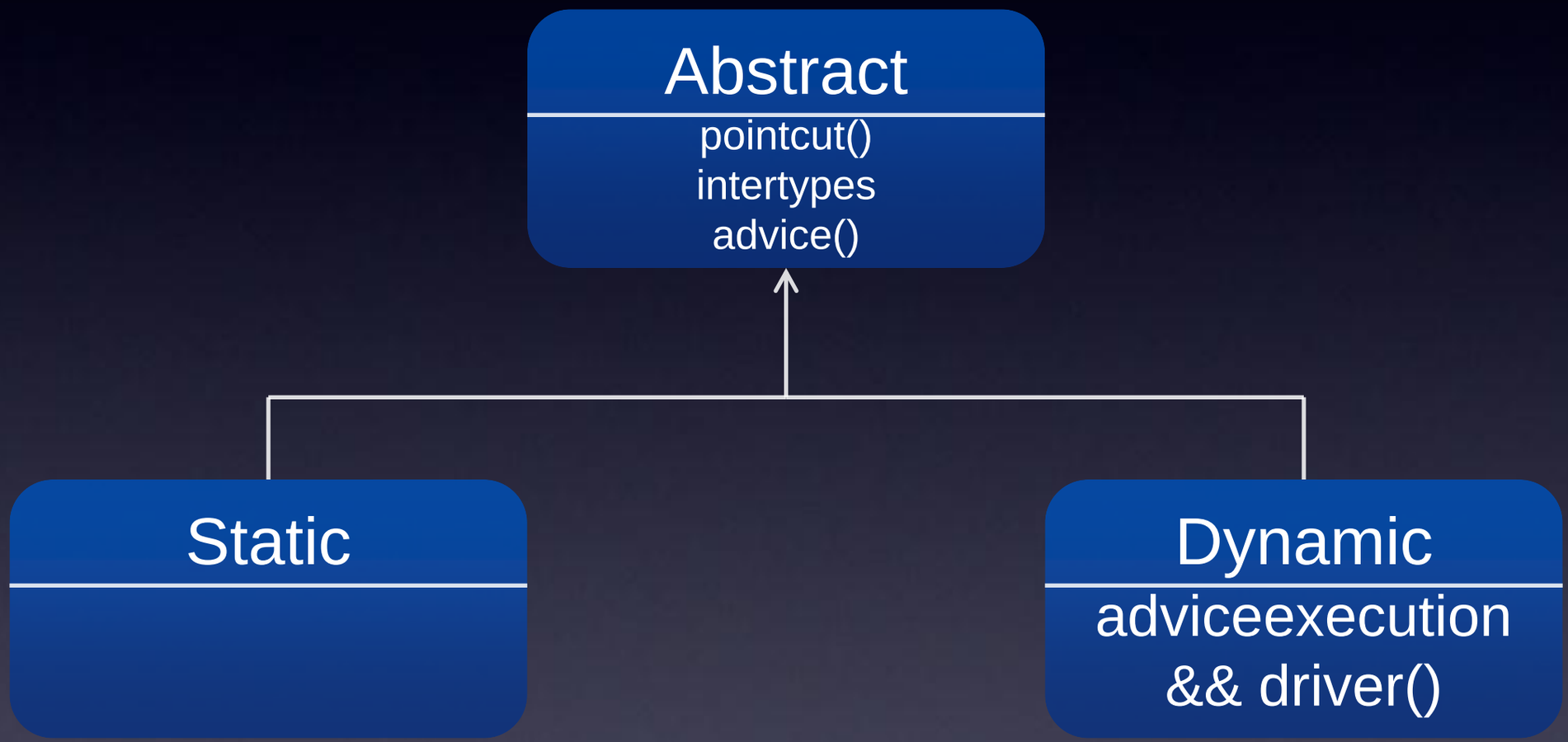
- Baseado em:
  - Padrões de projeto
  - AspectJ

Hierarquia de Edicts

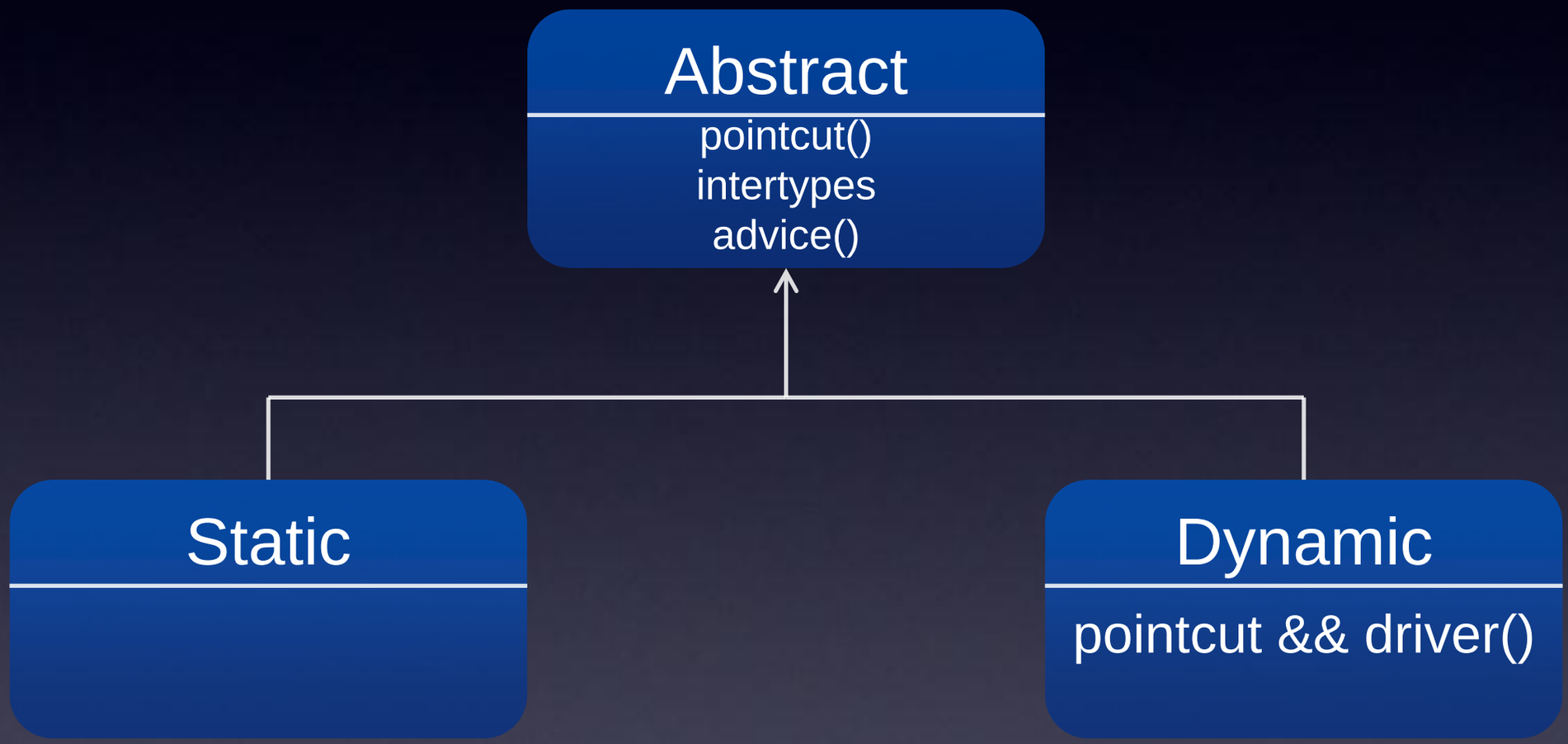


Por isso precisávamos de novos idiomas

Layered Aspects



Pointcut Redefinition



Implementação

Estudos de Caso

- 16 features
- Tetris | Freemind | ArgoUML | BerkeleyDB

Mas tem features que possuem interação...

Tetris: NextPieceBox

J2ME

NextPieceBox

J2ME ^ NextPieceBox

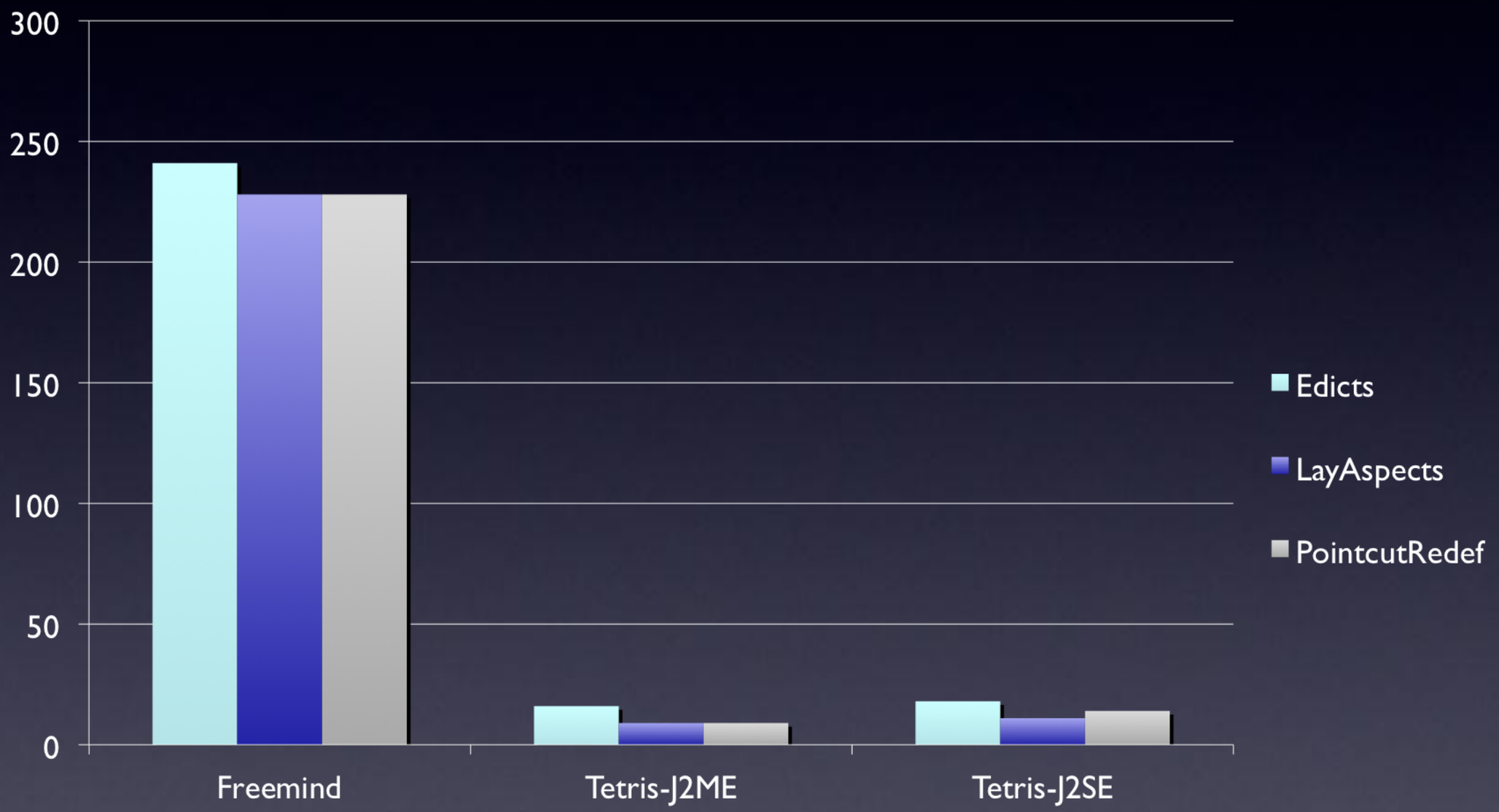
Avaliação

GQM

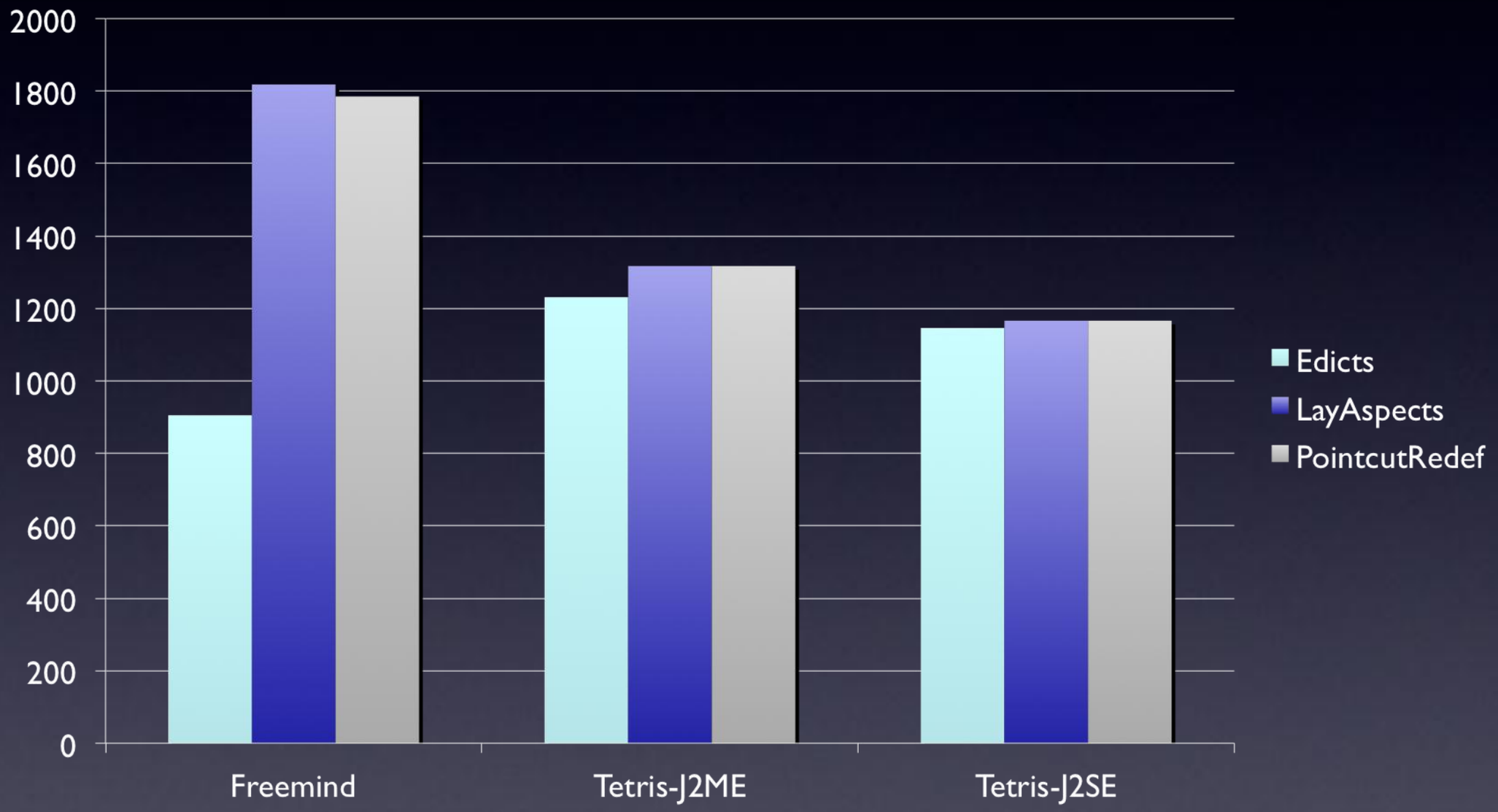
- Goal: avaliar os idiomas
- Questions
  - Espalhamento e entrelaçamento
  - Tamanho
  - Clone
  - Acoplamento
  - Falta de coesão
- Metrics: DOSC | CDC | DOTC | SLOC | VS | PCC | CBC | LCO

Novas Métricas

CBC


300
250
200
150
100
50
0
Freemind
Tetris-J2ME
Tetris-J2SE
Edicts
LayAspects
PointcutRedef

LCO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400
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Freemind
Tetris-J2ME
Tetris-J2SE
Edicts
LayAspects
PointcutRedef

Conclusões

- Extração baseada em Prune Dependency
- Dois idiomas novos
- Quatro features novas
- Duas métricas novas