

SOLIDOPT – AUTOMATED OPTIMIZATION OF SOFTWARE APPLICATIONS

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Current development and ...

Challenges

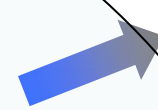
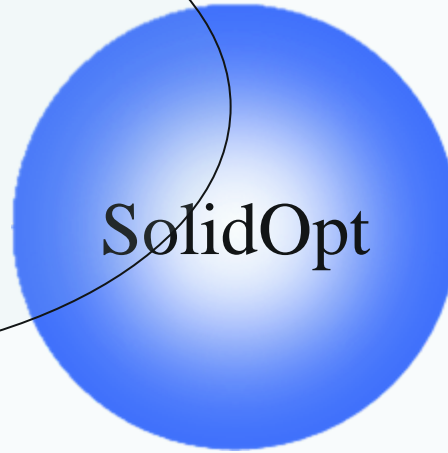
Goals

- ❖ Framework for Optimizations;
- ❖ Implementing common and domain-specific optimizations;
- ❖ Multiple models and different levels of abstraction;
- ❖ Apartness from the translator;
- ❖ Openness, Extensibility, Flexibility, Loose-coupling and Modularity.

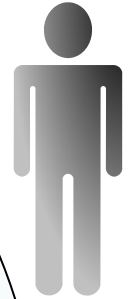


User roles

Developer



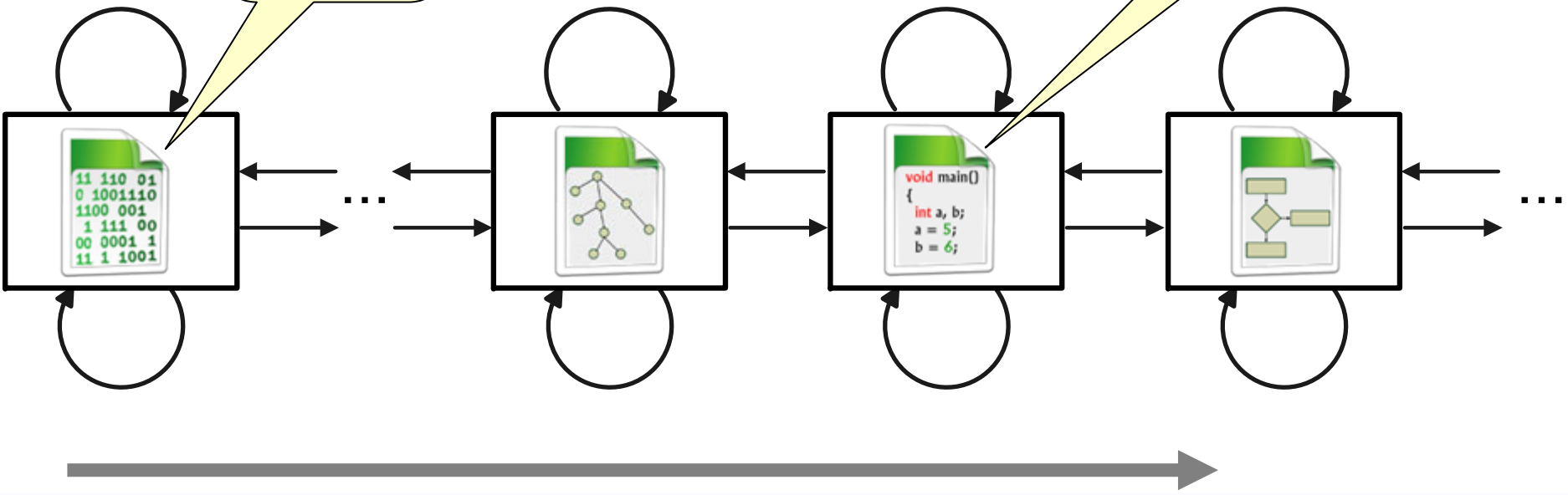
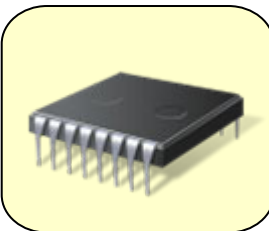
Client



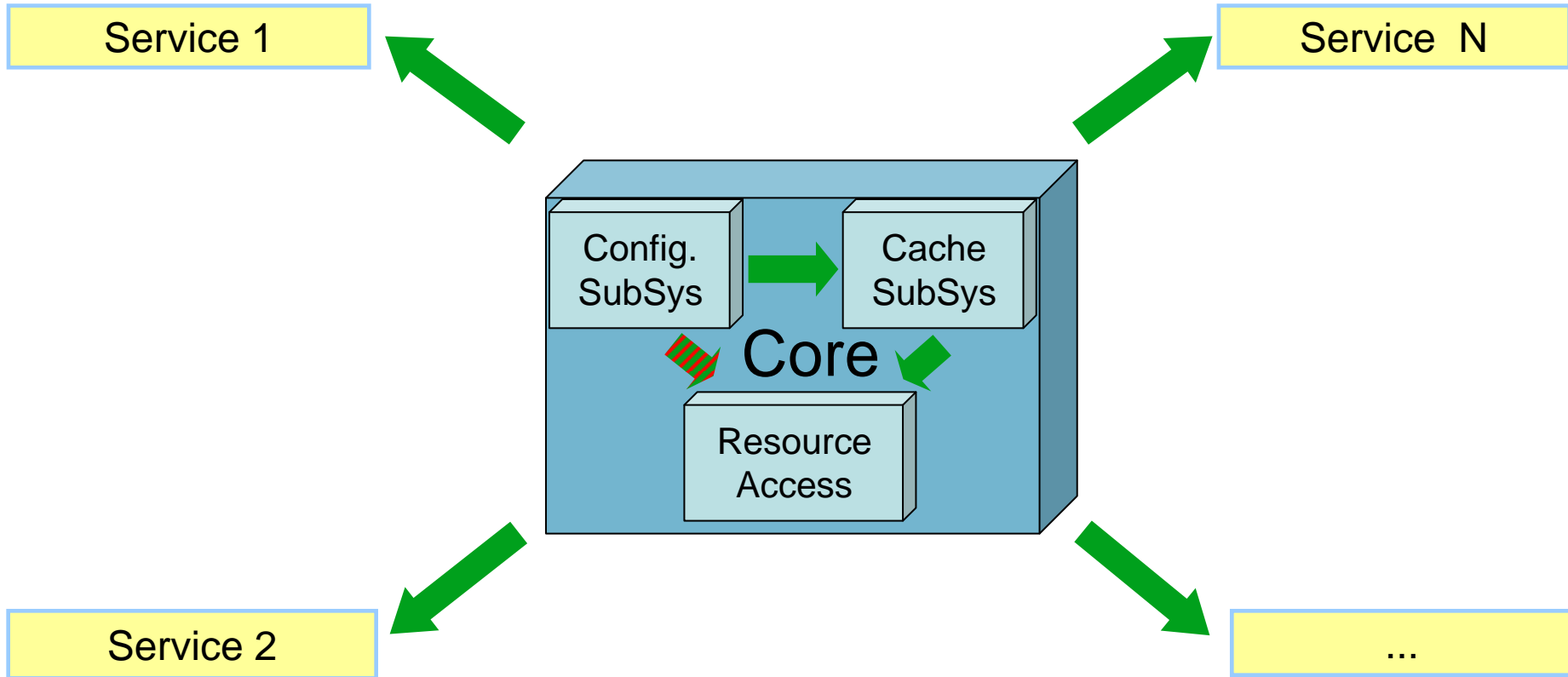
Integrator



Program models



Architecture



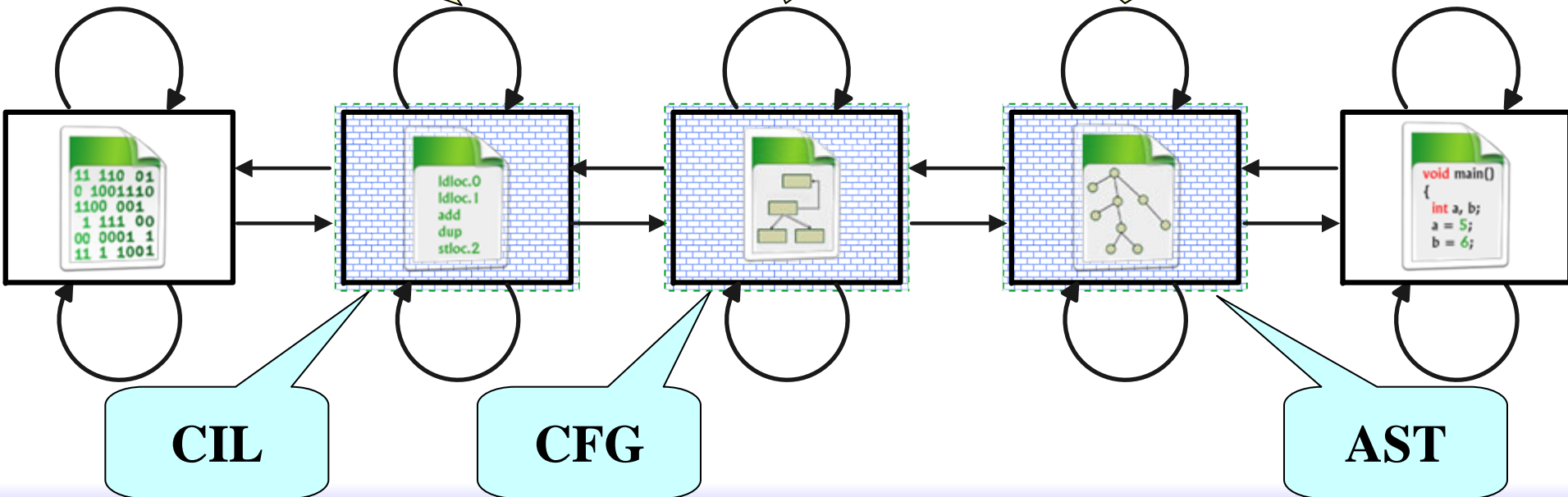
Current state



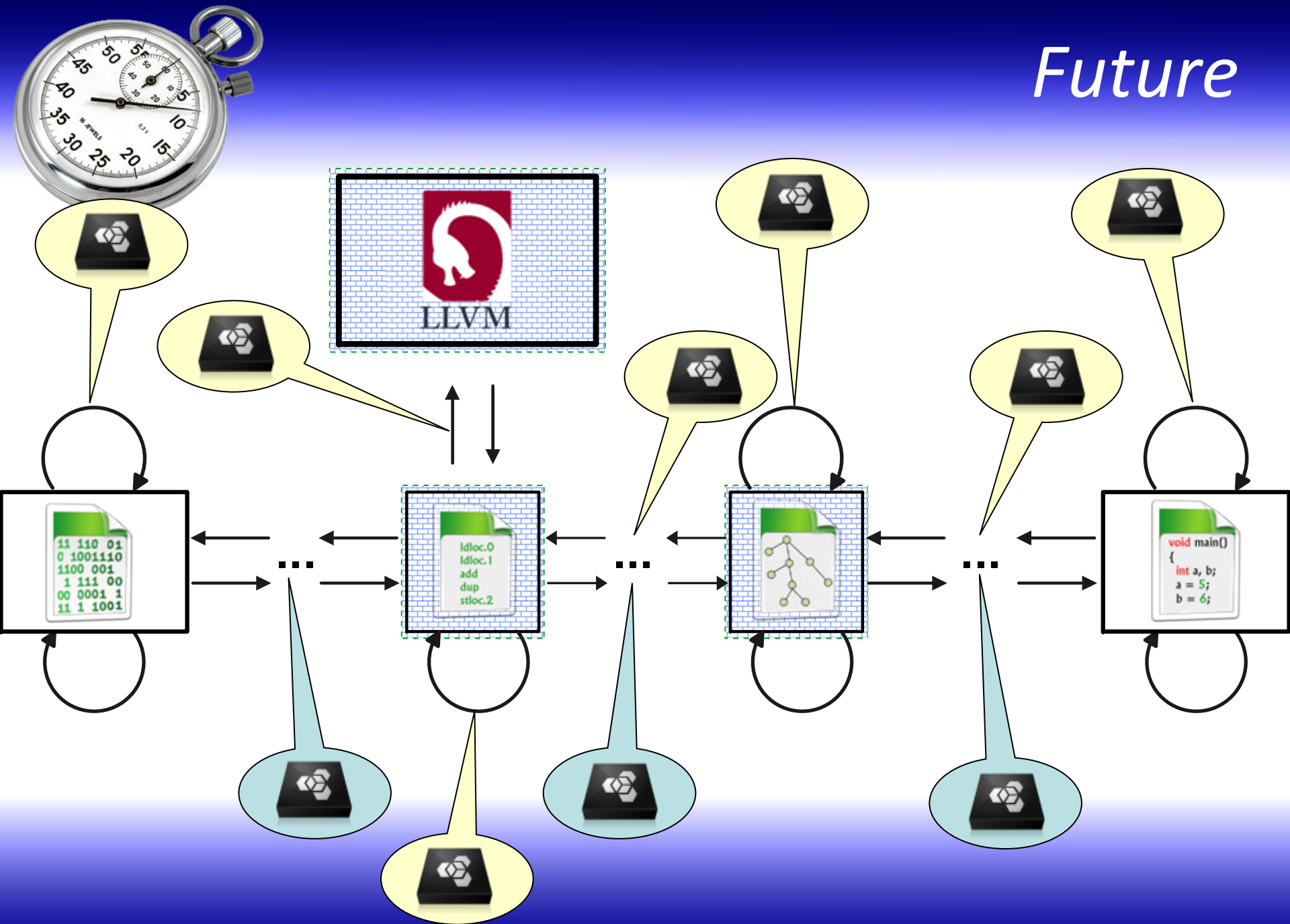
- Removes NOP
- Replaces OVF
- Method inline

- Dead code elimination

- Method inline
- Constant folding
- Simplifies expressions
- Constant propagation



Future



Still to do

- ❖ Finishing the unfinished modules and documenting the current state!
- ❖ Test Cases – SolidOpt, SolidTest;
- ❖ LLVM – integration;
- ❖ Creating tools, using the framework;
- ❖ New projects, relevant to SolidOpt;
- ❖ New code models: SSA, ...;
- ❖ New optimization methods;
- ❖ ...



Current tasks

1. Finishing unfinished parts, documenting the current state;
2. WEB:
 - ❖ ViewVC;
 - ❖ Users rights: ldap, svn, website, ...;
 - ❖ Doxygen;
 - ❖ Fix user profiles;
 - ❖ SolidOpt Now! (Online/RealTime Opt.)
3. Subprojects;
4. Naming Conv. & Dev. Conventions;
5. Licenses.



Questions ?

Discussion...



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