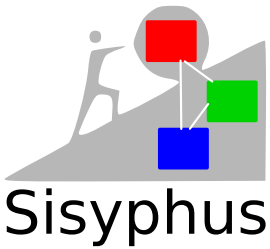


# Continuous Integration of Component-Based Product Lines

## Pacing the Heartbeat of Software Development



<http://www.cwi.nl/projects/deliver>  
<http://sisyphus.sen.cwi.nl:8080>  
<http://www.cwi.nl/~storm>  
 storm@cwi.nl

### Motivation

Different inter-dependent  
 - components - variants - etc.  
 - codelines - projects  
 - versions - repositories  
 And all this may evolve in time...

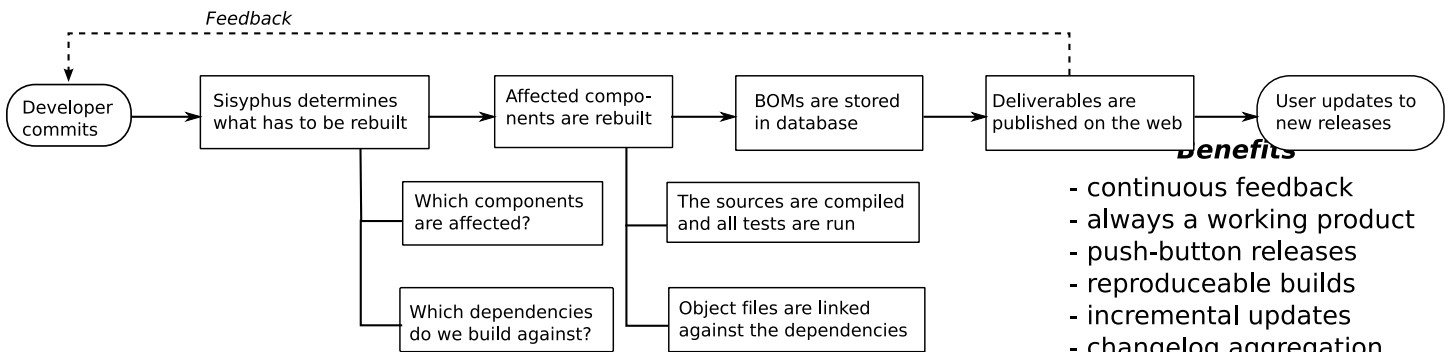
### Research question

*How to apply continuous integration  
 in component-based product lines  
 and use it for software delivery?*

### Approach

- extend continuous integration to continuous release
- maintain accurate bills-of-materials (BOMs)
- scale with build sharing and backtracking

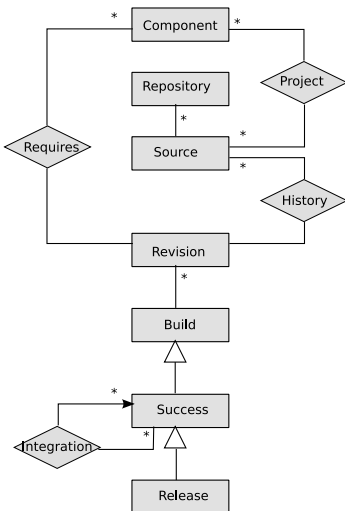
### Sisyphus workflow overview



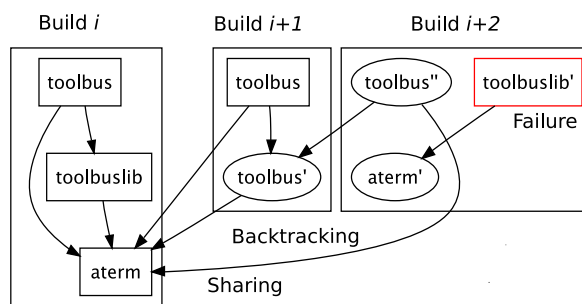
### Benefits

- continuous feedback
- always a working product
- push-button releases
- reproduceable builds
- incremental updates
- changelog aggregation
- better traceability

### Formal Model of Sisyphus



### Build sharing and backtracking



### Build results on the web

Builds	Sessions	Packages	Hosts	Logs	Sisyphus	Statistics
Status	breezer.sen.cwi.nl					
Builds	JJTraveler	success	14.07.14.00			
Sessions	JRelCal	success	14.07.14.00			
Packages	apigen	success	14.07.14.00			
Hosts	aso-support	success	14.07.14.00			
Logs	asf	success	14.07.14.00			
Sisyphus	asf-library	success	14.07.14.00			
Configuration	asf-support	success	14.07.14.00			
Profiles	asf-df-meta	success	16.02.14.00			
Sources	aterm	success	14.07.14.00			
Script	aterm-java	success	14.07.14.00			
	balanced-binary-aterms	success	14.07.14.00			
	config-manager	success	14.07.14.00			

