

2021-09-22

Getting started with Eiffel

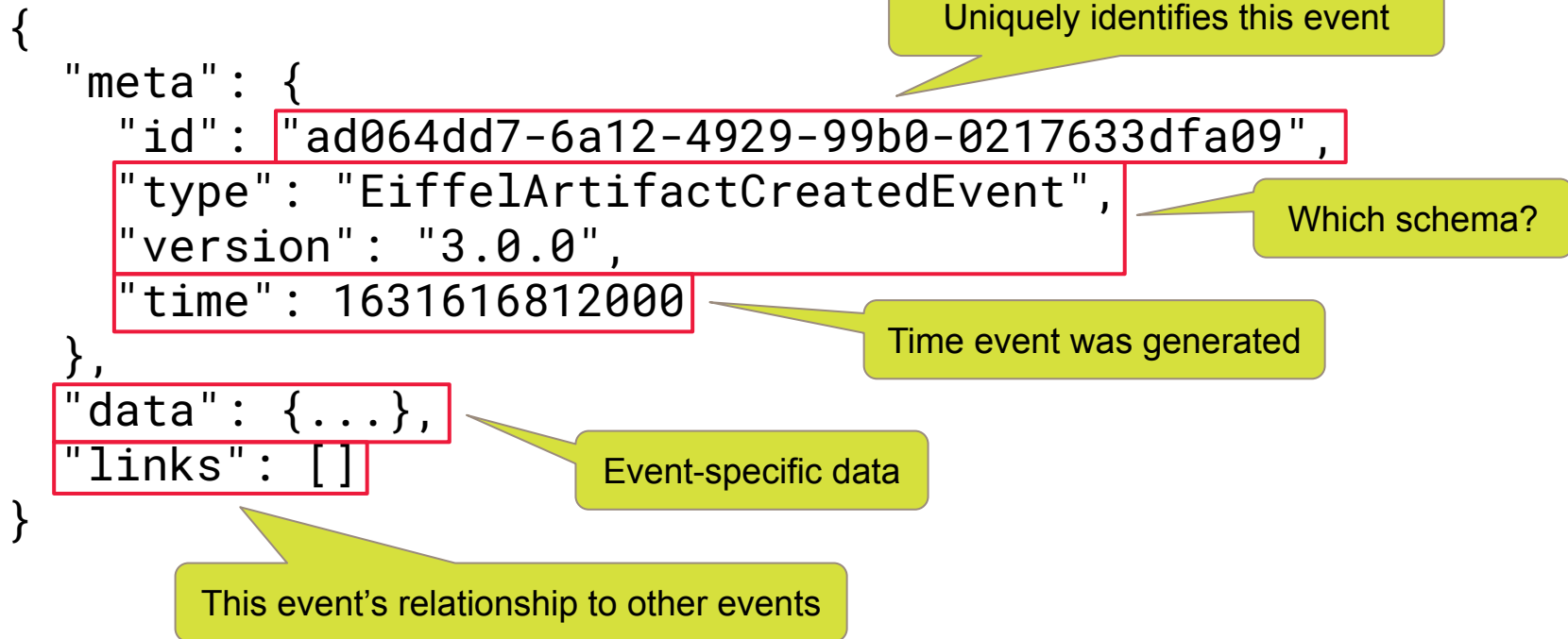
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You've had the Kool-Aid. Now what?

- > Going beyond the skin deep
 - What do Eiffel events really look like?
 - Walkthrough of key categories of events
- > Next steps
 - Infrastructure
 - What's *your* goal with Eiffel?

What does an Eiffel event look like?



Links

```
{
  "meta": {
    "id": "2342d8c0...",
    ...
  },
  "links": [
    {
      "target": "ad064dd7...",
      "type": "CAUSE"
    }
  ]
}
```

CAUSE

```
{
  "meta": {
    "id": "ad064dd7...",
    ...
  },
  "links": []
}
```

A few common link types

- > CAUSE
 - An Eiffel event that caused the source event to get sent. “This activity started because that test suite was successful.”
- > CONTEXT
 - An Eiffel event that the source event was a part of.

Eiffel event walkthrough

“Just one more thing...”

All Eiffel event types have a name like EiffelXXXEvent.

For space reasons we'll just call them XXX in the following slides.



Artifacts

An Eiffel **artifact** is some kind of data that's produced in a CI/CD system. Often one or more files produced by a build system.

Artifacts are identified with a Package URL
(<https://github.com/package-url/purl-spec>):

pkg:deb/debian/curl@7.50.3-1?arch=i386&distro=jessie

pkg:docker/cassandra@sha256:244fd47e07d1004f0aed9c

pkg:gem/ruby-advisory-db-check@0.12.4

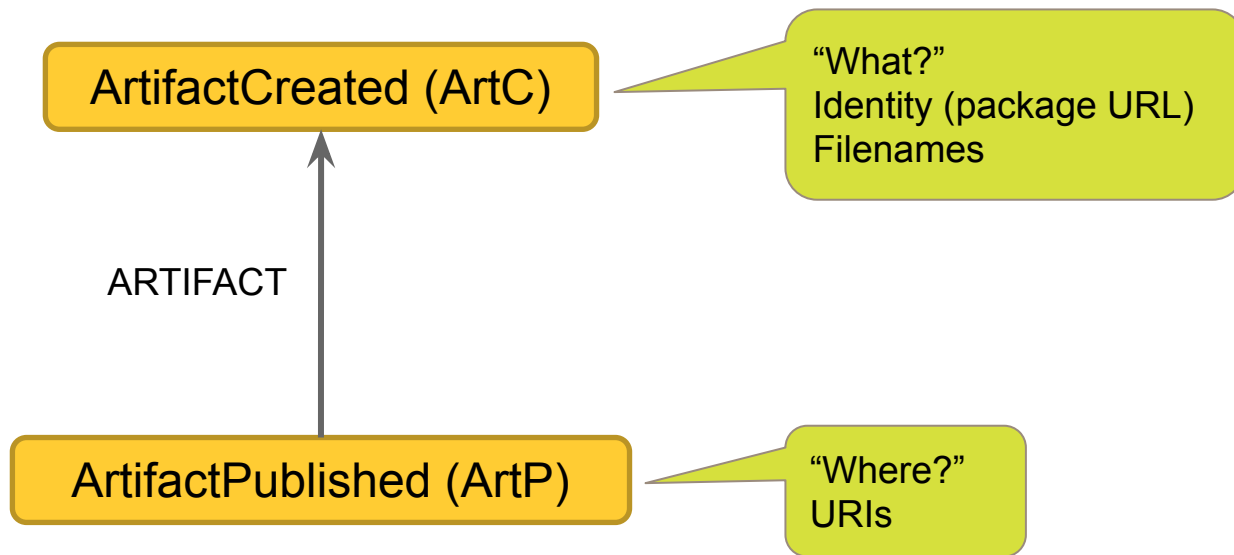
pkg:maven/org.apache.xmlgraphics/batik-anim@1.9.1?packaging=sources

pkg:npm/foobar@12.3.1

pkg:pypi/django@1.11.1

pkg:generic/openssl@1.1.10g

Artifacts

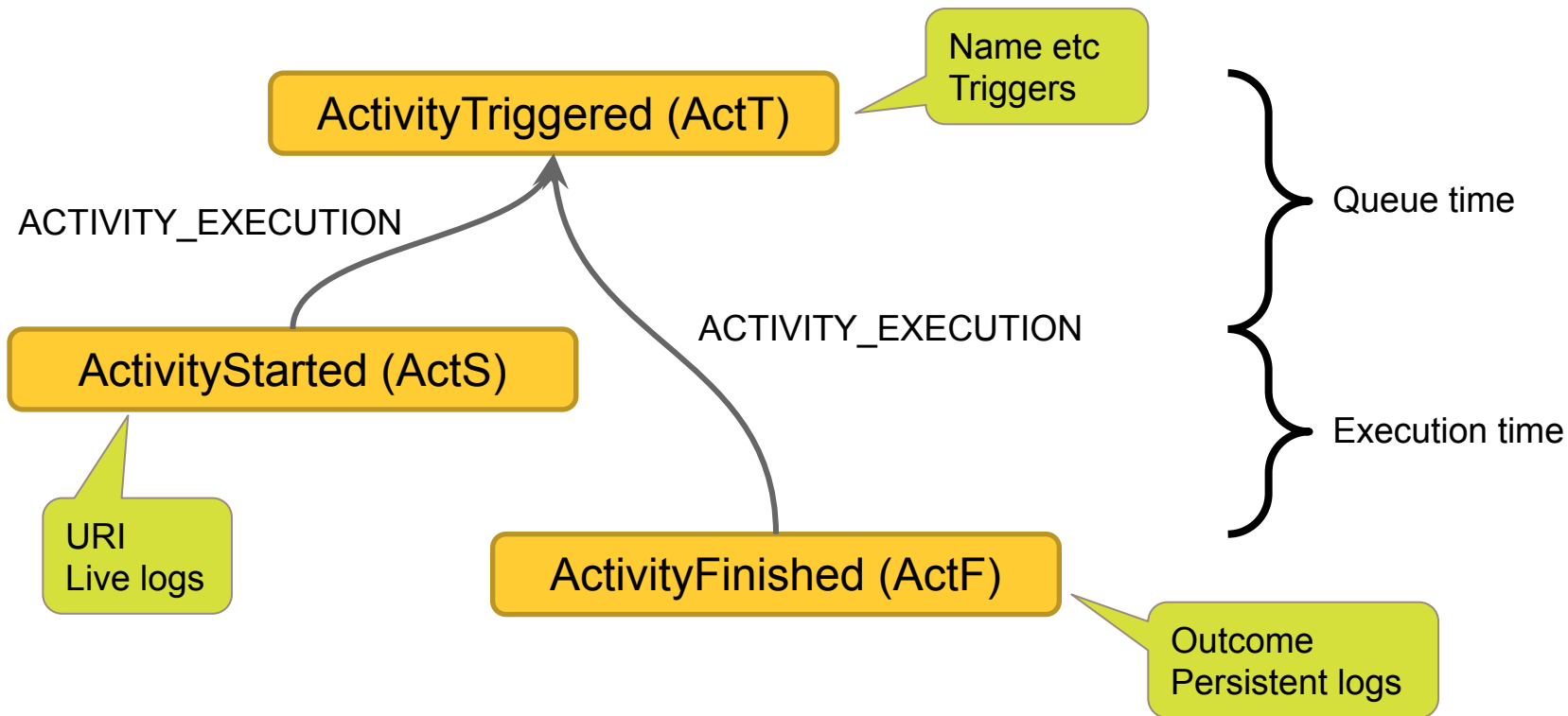


Activities

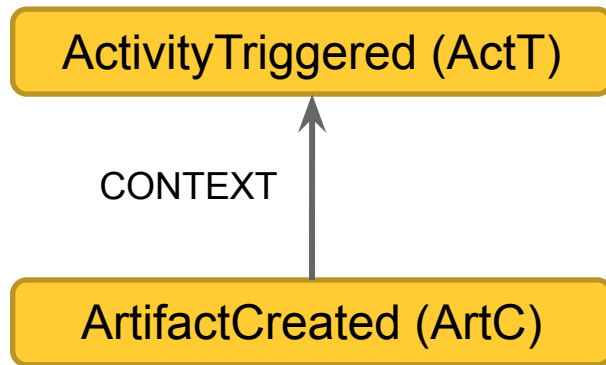
An Eiffel **activity** describes something that's taking place.

Activities typically don't carry meaning themselves, but they act as useful containers for artifacts and test executions.

Activities



Activities



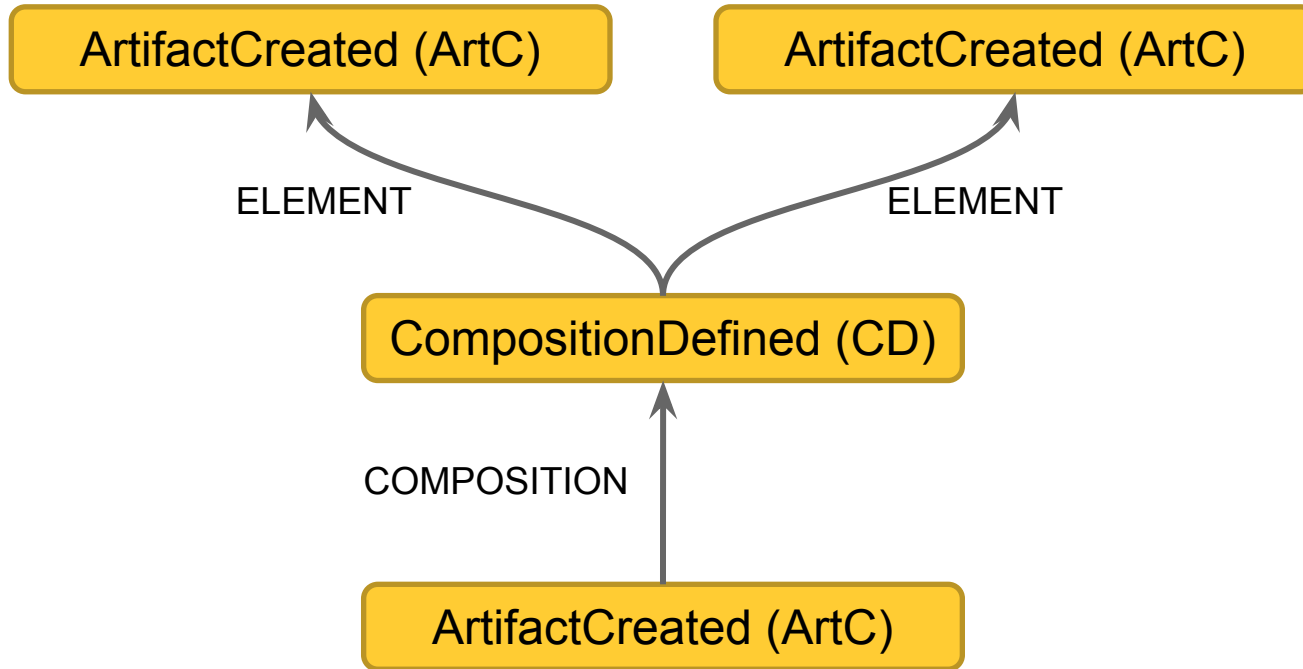
Compositions

An Eiffel **composition** groups artifacts, source changes, or other compositions.

A composition has a name and optionally a version.

Artifacts use compositions to indicate what they were created from.

Compositions

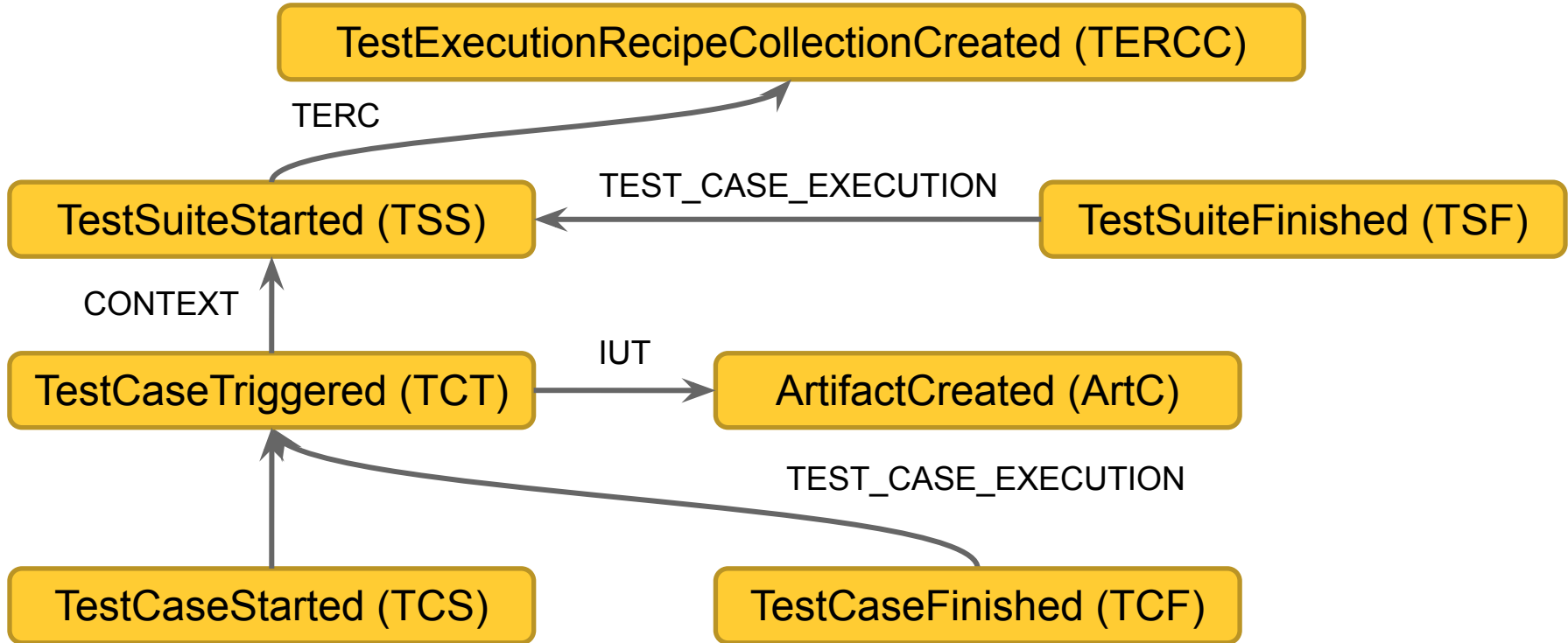


Tests

Eiffel defines various test-related events that describe what goes on during testing.

Like artifact creations tests are often connected to an Eiffel activity.

Tests

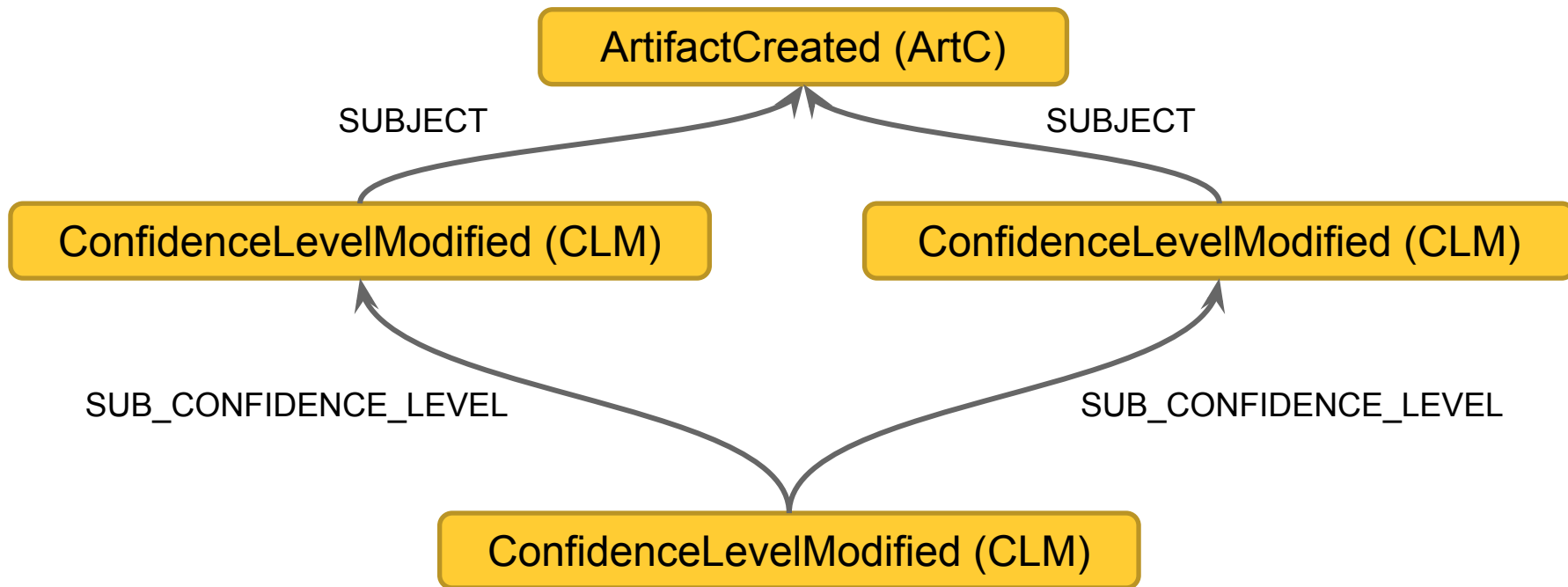


Confidence levels

An Eiffel **confidence level** declares that a set of Eiffel entities has been evaluated and found to achieve or not achieve a particular confidence level.

Example: “We’re confident that baseline X is releasable”.

Confidence levels

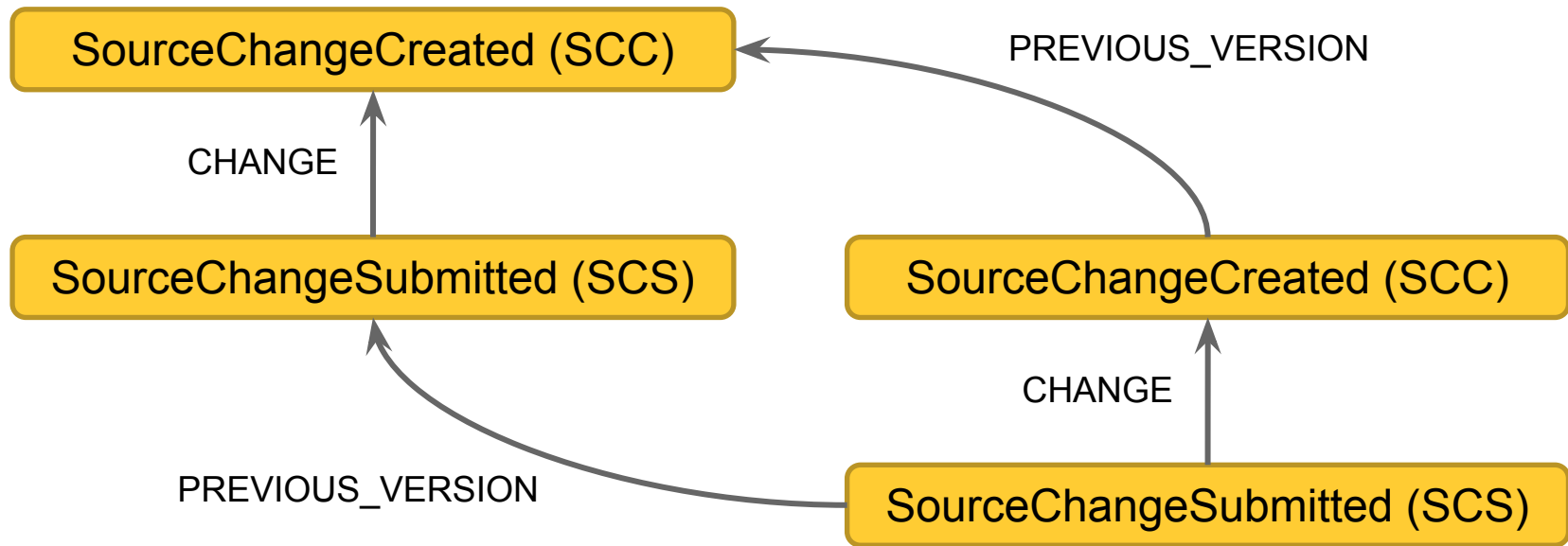


Source changes

Eiffel **source change** events describe what goes on in source code repositories.

Thanks to the links, source change events can represent the whole history of a repository.

Source changes



Eiffel implementation considerations

Eiffel infrastructure

- > Message broker: RabbitMQ typical choice
- > Event repository
 - Database
 - Service that inserts published events into the database
 - Access API(s)
- > Assisted publishing: Eiffel REMReM Publish

Choosing a goal

