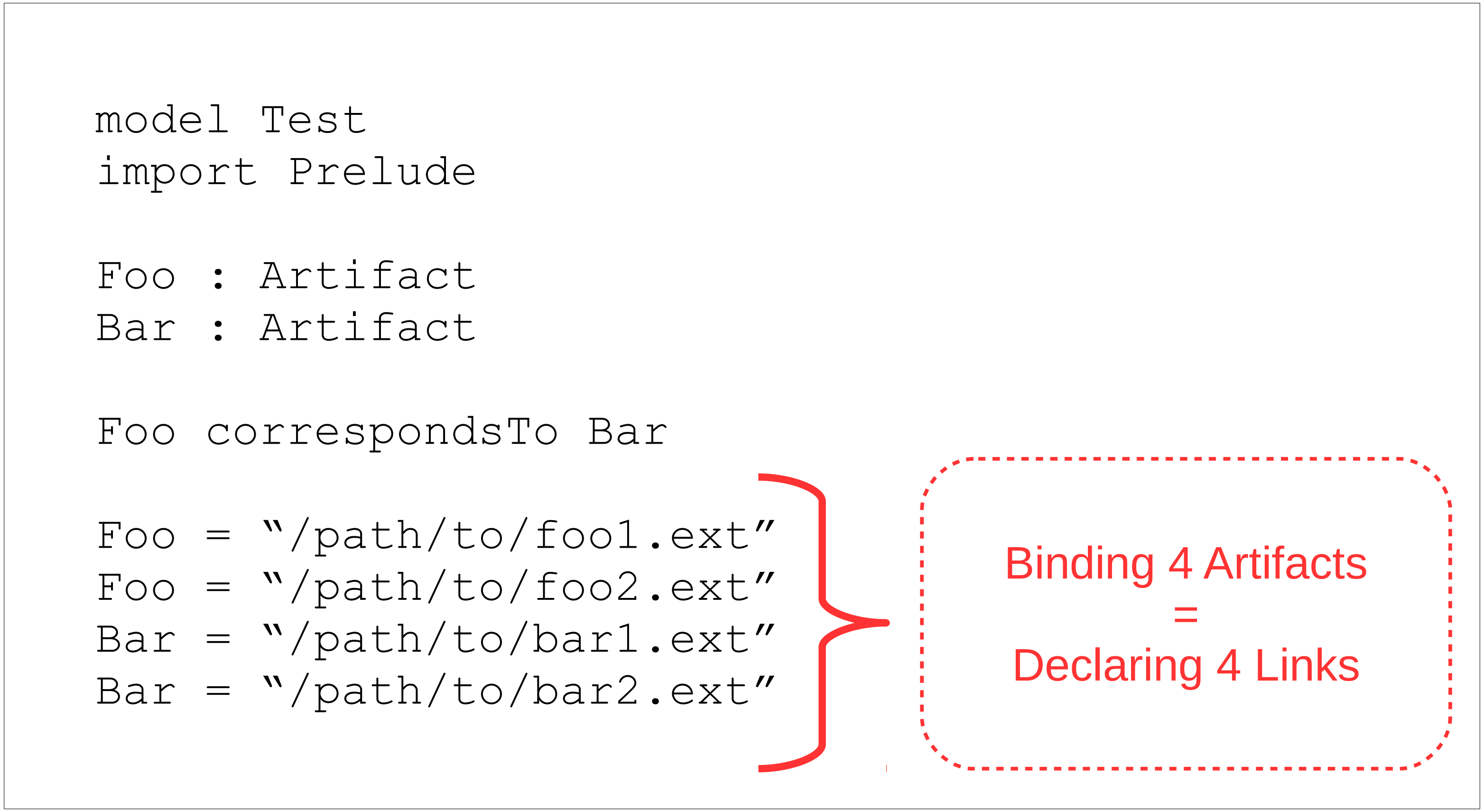
MegaL

Traceability Link Recovery

Declared Traceability Links



```
model Test
import Prelude

Foo : Artifact
Bar : Artifact

Foo correspondsTo Bar

Foo = “/path/to/foo1.ext”
Foo = “/path/to/foo2.ext”
Bar = “/path/to/bar1.ext”
Bar = “/path/to/bar2.ext”
```

Binding 4 Artifacts
=
Declaring 4 Links

Test.megal

Declared Traceability Links

```
correspondsTo(“/path/to/foo1.ext”,“/path/to/bar1.ext”)
correspondsTo(“/path/to/foo1.ext”,“/path/to/bar2.ext”)
correspondsTo(“/path/to/foo2.ext”,“/path/to/bar1.ext”)
correspondsTo(“/path/to/foo2.ext”,“/path/to/bar2.ext”)
```

Recovered Traceability Links

Inferred Traceability Links

```
model Prelude
…
File < Artifact
Folder < Artifact
Fragment < Artifact
…
partOf < Artifact * Artifact
partOf < Artifact * Technology
partOf < Technology * Technology
partOf < Language * Technology
…
elementOf < File * Language
```

Prelude.megal

Inferred Traceability Links

Additional Info needed to infer traceability links

```
model Test
FooBarTech : Technology
FooLang : Language
BarLang : Language

FooLang partOf FooBarTech
BarLang partOf FooBarTech

Foo : Artifact
Foo elementOf FooLang
Bar : Artifact
Bar elementOf BarLang

Foo correspondsTo Bar

Foo = “/path/to/foo1.ext”
Foo = “/path/to/foo2.ext”
Bar = “/path/to/bar1.ext”
Bar = “/path/to/bar2.ext”
```

```
FooPart : Fragment
FooPart partOf Foo
FooPart elementOf FooLang

BarPart : Fragment
BarPart partOf Bar
BarPart elementOf BarLang
```

1. We need FooLang/BarLang in order to select the right fragment parser.

2. We neet partOf/elementOf declarations in order to infer traceability links.

Inferred Traceability Links

- `correspondsTo(“/path/to/foo1.ext”,“/path/to/bar1.ext”)`
  - `correspondsTo(“/path/to/foo1.ext/foopartN”,“/path/to/bar1.ext/barpartI”)`
  - `...`
  - `correspondsTo(“/path/to/foo1.ext/foopartM”,“/path/to/bar1.ext/barpartJ”)`

(Hopefully) Recovered Traceability Links

Inferred Traceability Links

Do we base traceability link inference
on partOf/elementOf hierarchies?