

# Chapter 1

## Code Samples (2)

### 1.1 OCL

```
library mine
  metamodel uml
  require ocl_library_imports

  public definitions
    context Edge
      inv: self.from <> self.to
      inv: self.oclIsTypeOf(from)
      inv: self->includes(from)
      inv: self.allInstances
      inv: self.isUnique(self)
      inv: from or to.name = "hello"
      inv: from and to
      inv: self->isEmpty()
      inv: self->exists(from | a)
      inv: self->forAll(from | a)
      inv: self.size() = 1
    enddefinitions
  endlibrary
```

### 1.2 Crocopat

```
RedirectsTo(a, b) :=
  Page(a) & a != "null" &
  EX(e, EventTrigger(e) &
    eventTriggers(a, e) &
    name(e, "access") &
```

```

    Page(b) & b != "null" &
    EX(w, NavigateWire(w) & from(w, e) & to(w, b)));

RedirectsTo(a, b) :=
    Page(a) & Page(b) & TC(RedirectsTo(a, b));

InfiniteRedirect(p) :=
    Page(p) & p != "null" &
    RedirectsTo(p, p);

PRINT ["Infinite redirection"] InfiniteRedirect(p);

```

## 1.3 LTL

```

-- checks for infinite loops

LTLSPEC
    G (operation_running = 1 -> F operation_finished = 1)

LTLSPEC
    -- uses same format as loop.smv
    G ((!(navigation_running = 1 -> !(F navigation_finished = 1))) U navigation_running = 0)

```

# **Bibliography**