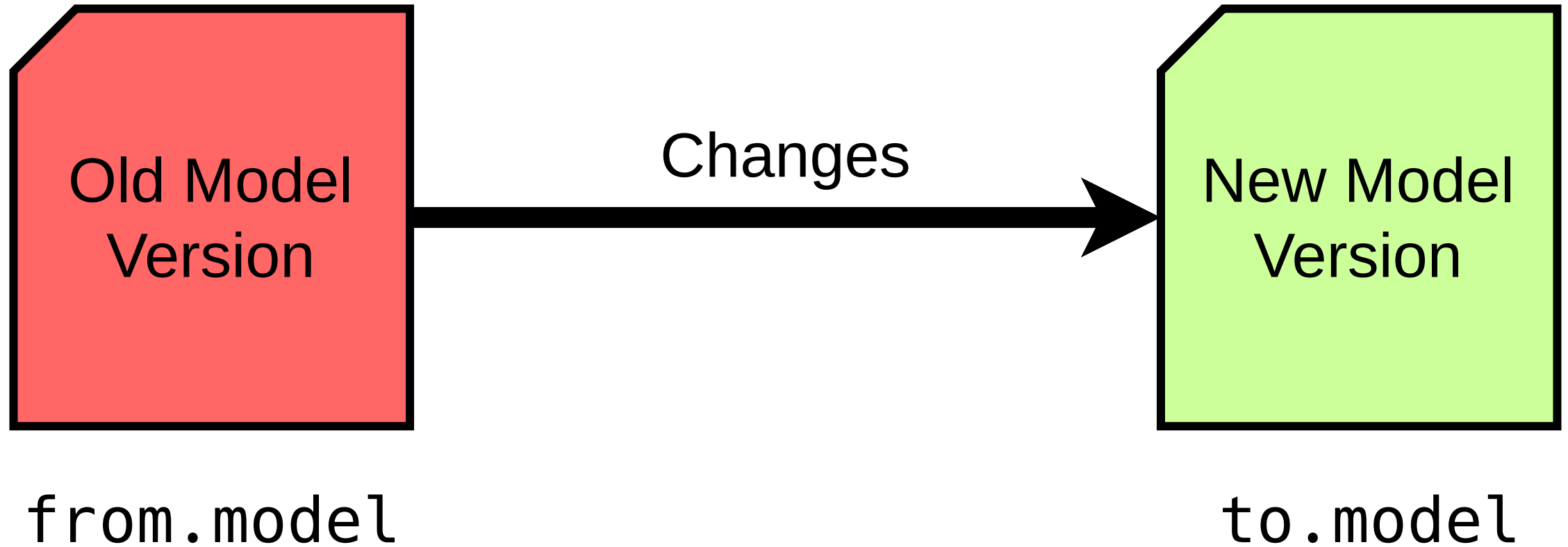# Towards an Interoperable and Customisable Textual Format for Model Differences Reporting

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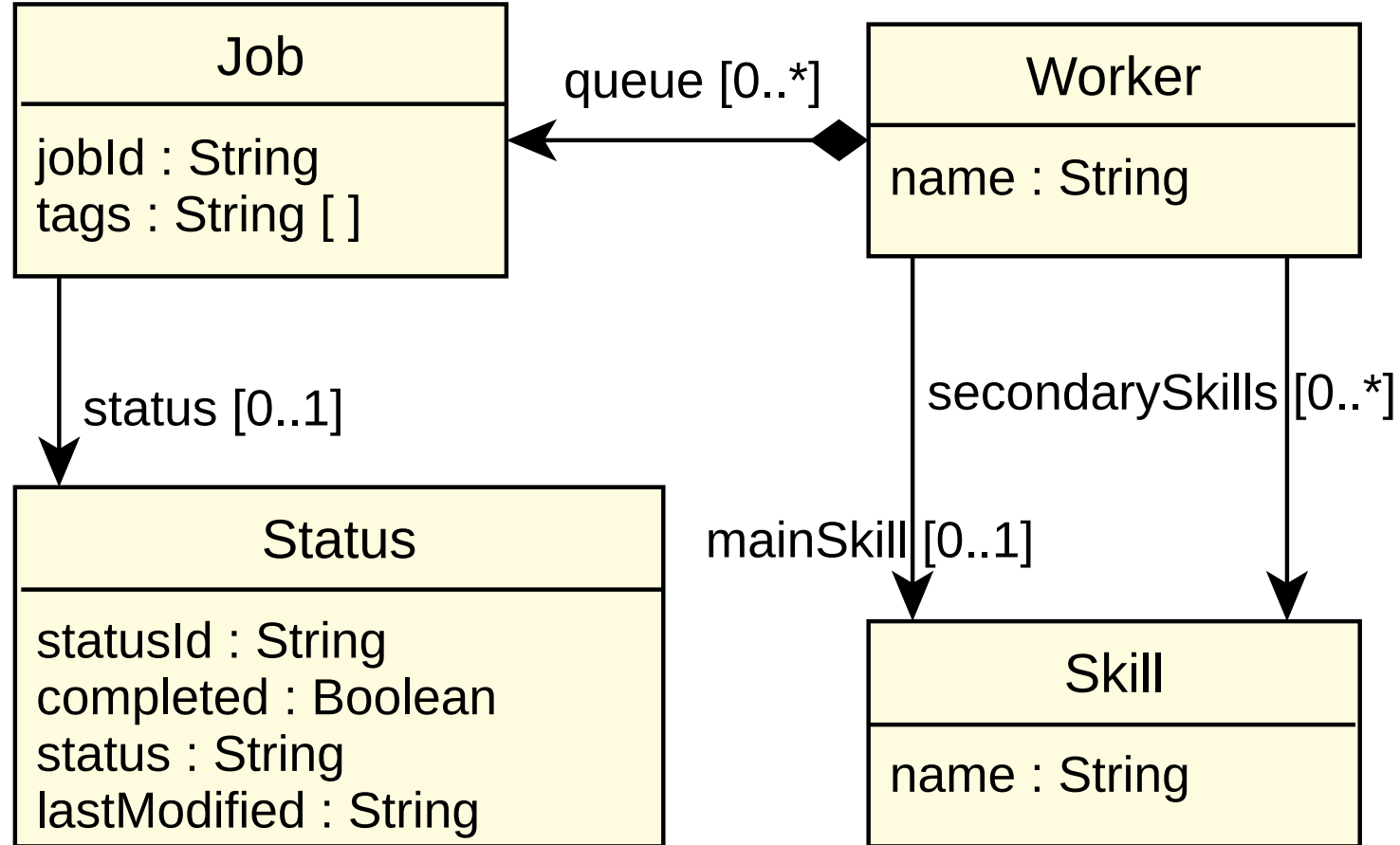Software Engineering and Real-Time Group
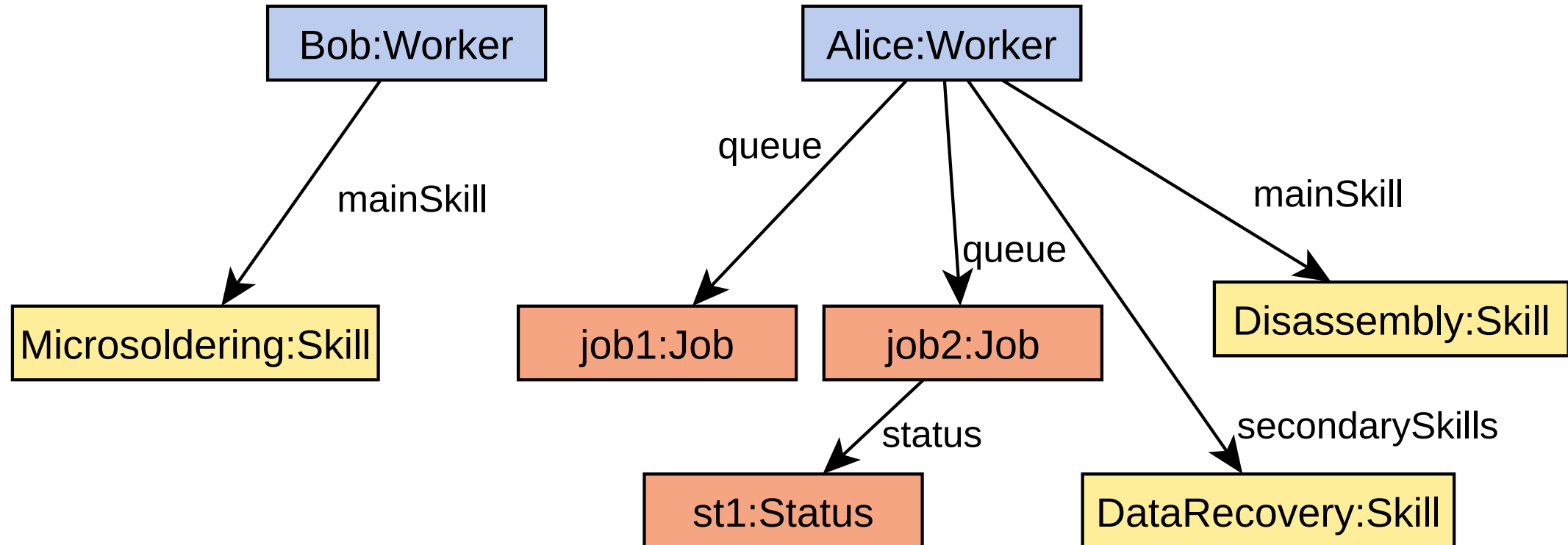
Universidad de Cantabria

Two-Way Model Comparison

Old Model Version → Changes → New Model Version

from.model

to.model

Two-Way Model Comparison: Stages

1. Comparison

2. Differences Representation

3. Differences **Reporting**

Kolovos et al. Different models for model matching: An analysis of approaches to support model differencing

3

Example: Repair Shop (metamodel)

Job

jobId : String
tags : String [ ]

Worker

name : String

queue [0..*]

status [0..1]

secondarySkills [0..*]

mainSkill [0..1]

Status

statusId : String
completed : Boolean
status : String
lastModified : String

Skill

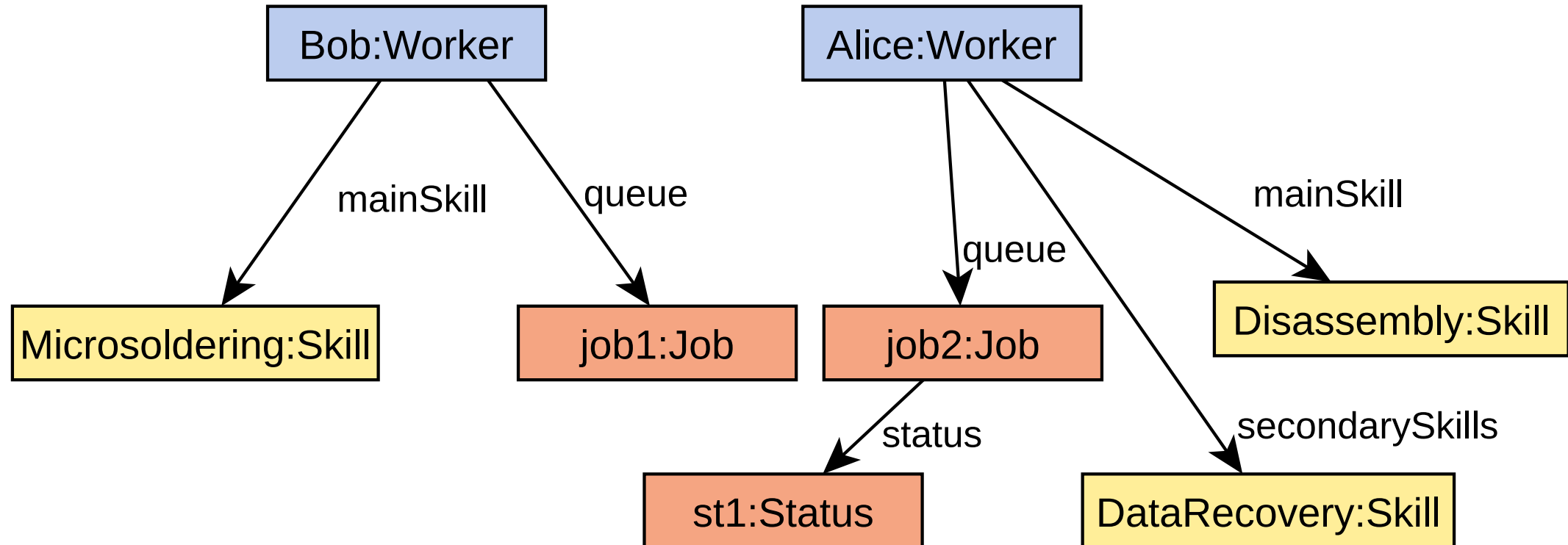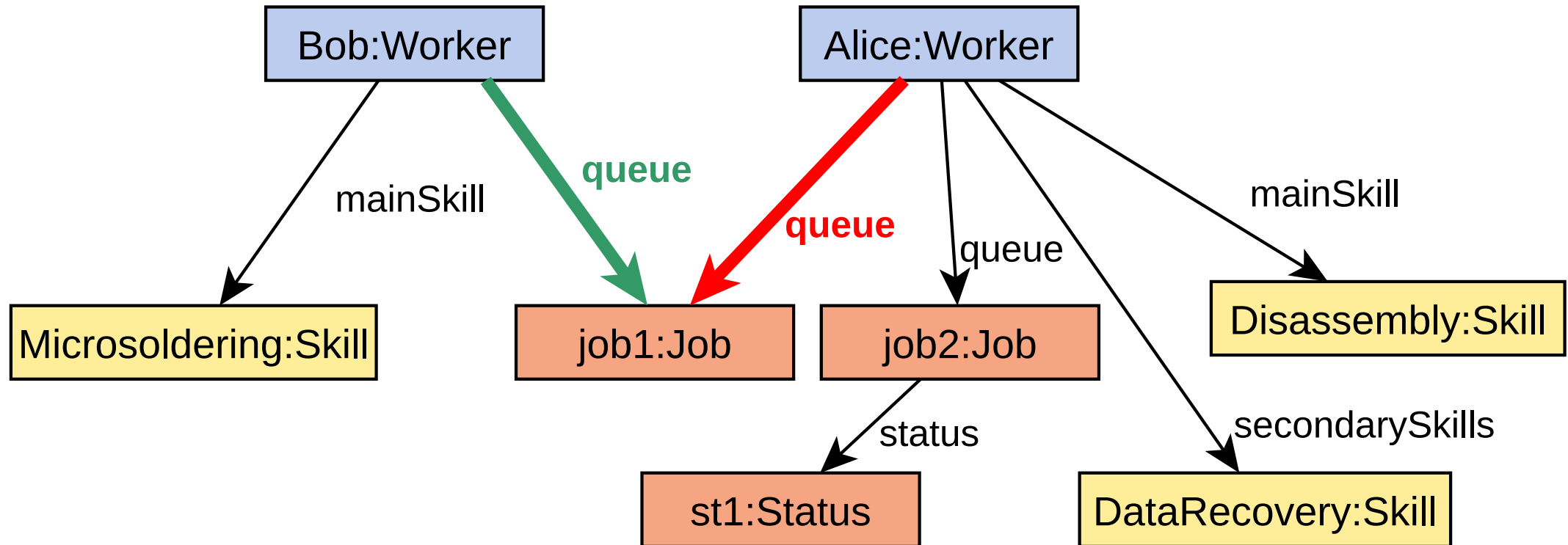name : String

from.model

to.model

Graphical diff

The *job1* job moves from Alice's queue to Bob's

Why not textual diff as well?

Why not textual diff as well? XMI

Remember: the only change is *job1* moving from Alice's to Bob's queue
,

```
$ diff -u from.model to.model
--- from.model          2023-08-29 10:53:19.565935674 +0200
+++ to.model            2023-08-29 10:53:19.565935674 +0200
@@ -6,6 +6,11 @@
    <workers name="Alice"
      mainSkill="Disassembly"
      secondarySkills="Microsoldering DataRecovery">
+    <queue jobId="job2"
+        description="broken phone screen"/>
+  </workers>
+  <workers name="Bob"
+      mainSkill="Microsoldering">
    <queue jobId="job1"
        description="laptop does not charge">
      <tags>battery</tags>
@@ -14,11 +19,7 @@
          statusId="st1"
          status="pending"/>
      </queue>
-    <queue jobId="job2"
-        description="broken phone screen"/>
  </workers>
-  <workers name="Bob"
-      mainSkill="Microsoldering"/>
  <skills name="Microsoldering"/>
  <skills name="Disassembly"/>
  <skills name="DataRecovery"/>
```