B IDL and VPL Definitions for the conference example

This appendix contains the complete IDL and VPL definitions for the conference example in chapter 6.

B.1 IDL

module demo {

    module conference {

        /* simple Documents... */

        interface Document {
            /* the title is set on creation */
            readonly attribute string title;
            readonly attribute string author;
            string read();
            void write( in string text );
            void append( in string text );
            void update( in string text );
        }

        interface Review; // forward decl.

        /* Papers are created using the Submission interface */

        typedef long ReviewerId;
        typedef sequence< ReviewerId > ReviewerIdSeq;

        interface Paper : Document {
            /* id, assigned when created by Submission */
            readonly attribute long number;
        }
    }
}

159
void submit();

Review submitReview( in string review,
    in ReviewerId reviewer);
Review listReviews();

Review getReview( in ReviewerId reviewer);
);

interface Review : Document
{
    readonly attribute ReviewerId reviewer;
};

struct PaperId
{
    long number;
    string title;
};

typedef sequence <PaperId> PaperIdSeq;

exception AlreadyRegistered {};
exception IncompleteInformation {};

interface SubmissionManagement
{
    /* for authors */
    Paper registerPaper( in string author_name,
                        in string title )
                        raises( AlreadyRegistered, IncompleteInformation );

    /* for reviewers */
    PaperIdSeq listPapers();
    Paper getPaper( in long paperNumber );
};

interface ConferenceManagement
{
    /* retrieve submission management interface */
    SubmissionManagement getSubmissionManagement();
    readonly attribute Document callForPapers;
    /* conference management operations */
B.2 VPL

void issueCallForPapers(in string cfp);
void beginSubmission();
void deadlineReached();
void makeDecision();

};

B.2 VPL

policy Conference
{
  roles
  
  Reviewer
  holds Member
  on "IDL:demo/conference/SubmissionManagement:1.0"
  holds SubmissionAccessing
  on "IDL:demo/conference/ConferenceManagement:1.0"
  holds PaperReviewing
  on "IDL:demo/conference/Paper:1.0"
  
  Chair: Reviewer
  holds Steering
  on "IDL:demo/conference/ConferenceManagement:1.0"
  holds PaperReading
  on "IDL:demo/conference/Paper:1.0"
  maxcard 1
  excludes Author
  
  Author
  holds SubmissionAccessing
  on "IDL:demo/conference/ConferenceManagement:1.0"
  holds Registering
  on "IDL:demo/conference/SubmissionManagement:1.0"
  
  virtual view SubmissionPhase
  virtual view ReviewingPhase
  
  // initial views
  
  view Member
  controls "IDL:demo/conference/SubmissionManagement:1.0"
  {
    allow
### B  IDL and VPL Definitions for the conference example

```idl
listPapers
getPaper
)

view SubmissionAccessing
  controls "IDL:demo/conference/ConferenceManagement:1.0"
  {
    allow
getSubmissionManagement
callForPapers
  }

view Steering : SubmissionAccessing
  controls "IDL:demo/conference/ConferenceManagement:1.0"
  restricted_to Chair
  {
    allow
    issueCallForPapers
    beginSubmission
deadlineReached
    makeDecision
  }

view Registering
  controls "IDL:demo/conference/SubmissionManagement:1.0"
  requires SubmissionPhase
  {
    allow
    registerPaper
  }

view Reading controls "IDL:demo/conference/Document:1.0" {
  allow
  read
title
}

view Modifying : Reading
  controls "IDL:demo/conference/Document:1.0"
  {
    allow
    update
    write
    append
  }
```
view PaperReading : Reading
  controls "IDL:demo/conference/Paper:1.0"
  {
    allow
    number
    author
    listReviews
  }

view PaperSubmitting : PaperReading
  controls "IDL:demo/conference/Paper:1.0"
  requires SubmissionPhase
  {
    allow
    submit
  }

view PaperReviewing : PaperReading
  controls "IDL:demo/conference/Paper:1.0"
  restricted_to Reviewer
  requires ReviewingPhase
  {
    allow
    listReviews
    submitReview
  }

view NoMorePaperReviewing
  controls "IDL:demo/conference/Paper:1.0"
  {
    deny
    submitReview
  }

view ReviewAccess
  controls "IDL:demo/conference/Paper:1.0"
  restricted_to Reviewer
  {
    allow
    getReview
  }

view ReviewReading : Reading
  controls "IDL:demo/conference/Review:1.0"
  {
    allow
    reviewer
  }
schema SubmissionSchema
  observes "IDL:demo/conference/SubmissionManagement:1.0"
  {
    registerPaper
    assigns PaperSubmitting, Modifying on result to caller
  }

schema PaperSchema
  observes "IDL:demo/conference/Paper:1.0"
  {
    submitReview
    assigns
      Modifying on result to caller
    assigns
      ReviewReading on result to Reviewer
    assigns
      ReviewAccess on this to caller
    assigns
      NoMorePaperReviewing on this to caller
    submit
    assigns
      PaperReading on this to Reviewer
    removes
      Modifying on this from caller
  }

schema Steering
  observes "IDL:demo/conference/ConferenceManagement:1.0"
  {
    issueCallForPapers
    assigns
      Reading
      on this.callForPapers
      to Author, Chair, Reviewer
    beginSubmission
    assigns
      SubmissionPhase
      on "IDL:omg.org/CORBA/Object:1.0"
      to Author
    deadlineReached
    assigns
      ReviewingPhase
      on "IDL:omg.org/CORBA/Object:1.0"
      to Reviewer
    removes
      SubmissionPhase
on "IDL:omg.org/CORBA/Object:1.0"
from Author
makeDecision
removes
ReviewingPhase
on "IDL:omg.org/CORBA/Object:1.0"
from Reviewer

}
B  IDL and VPL Definitions for the conference example