

Automatic model composition

Initial AnalysisModel:

```

model AnalysisModel
  import Mediators.*;
  Requirements.Req req1;
  SRI sri;
end AnalysisModel;
  
```

Binding:

client instance reference = binding expression

A **binding** is a causal relation which specifies that, at any simulated time, the value given to the referenced client instance shall be the same as the value computed by the right-hand expression.

Updated AnalysisModel model with a binding:

```

model AnalysisModel
  import Mediators.*;
  Requirements.Req req1(numberOfCavPumps=
    sum({
      (if (HFunctions.H_is_cavitating(sri.PO1.Qv, sri.PO1.C1_P, 1))
        then 1 else 0),
      (if (HFunctions.H_is_cavitating(sri.PO2.Qv, sri.PO2.Pmin, 1))
        then 1 else 0),
      (if (HFunctions.H_is_cavitating(sri.PO3.Qv, sri.PO3.C1_P, 1))
        then 1 else 0));
  });
  
```

```

SRI sri;
end AnalysisModel;
  
```