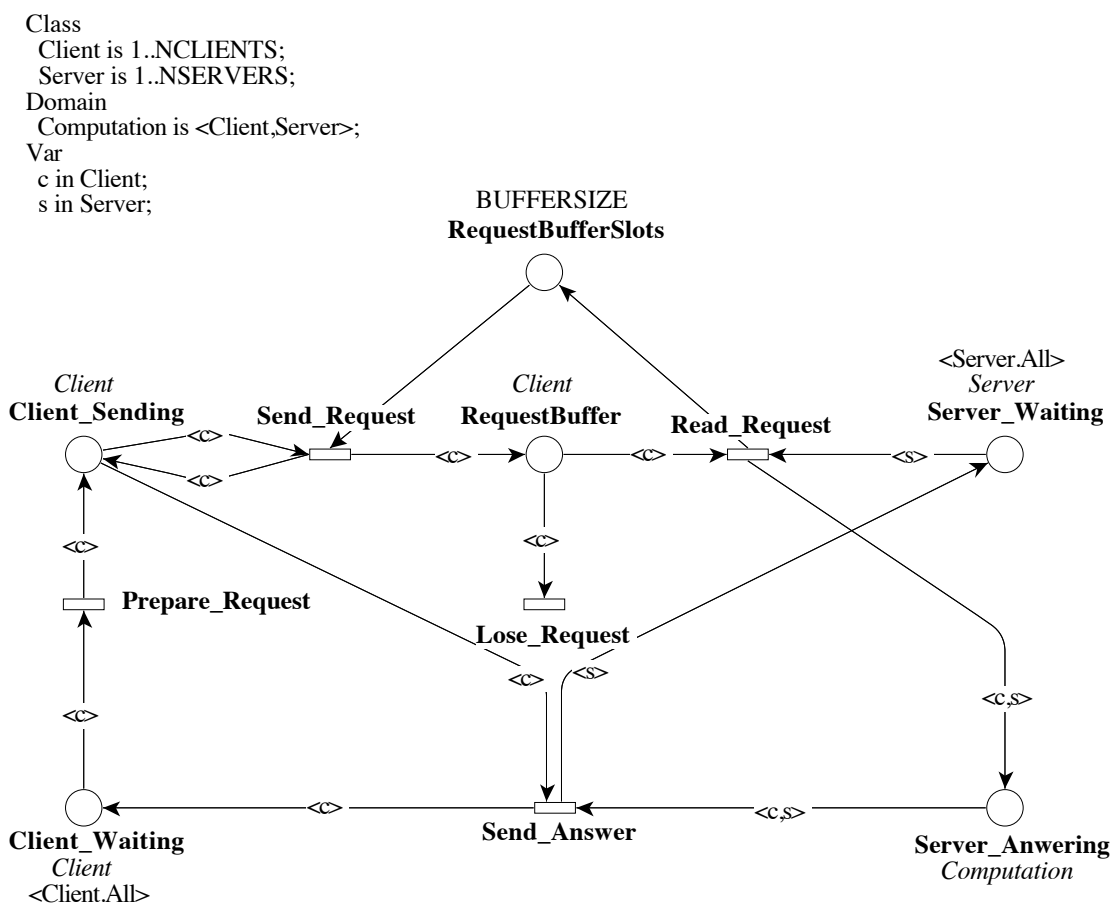# Introduction

This Model form is a short description of the Client/Server with Repetitions model that comes, for the Model Checking Contest @ Petri Nets, with: a set of PNML files, a set of properties to be checked (possibly one file per model instance) and an optional set of properties concerning the model (invariants, etc. – possibly one file per model instance). For Coloured Nets, equivalent PNML P/T net files are proposed too.

Client/Server with Repetitions

```
Class
  Client is 1..NCLIENTS;
  Server is 1..NSERVERS;
Domain
  Computation is <Client,Server>;
Var
  c in Client;
  s in Server;
```


Presentation

Description: This Petri net models a client/server application with NCLIENTS clients and NSERVERS servers. Communication from clients to servers is not reliable, with requests stored in a buffer of size BUFFERSIZE. Communication from servers to clients are reliable. A client send its message until it receives an answer.

The interesting point is that place RequestBuffer is not 1-bounded. This model can thus be used to assess how model checkers behave for colored non-safe nets.

Origin: None

Scaling parameter

Name	Description	Values
n	To set only one parameter, we can set a parameter n and compute model parameters, for instance with: NCLIENTS=n^2, NSERVERS=n, BUFFERSIZE=n	2, 3, 4, 5, 7, 10

Information about the Model

Data on the Model

Number of places	Number of transitions	Number of arcs	Scaling parameter value
1 + 3*NCLIENTS + NSERVERS + NCLIENTS*NSERVERS	3*NCLIENTS + 2*NCLIENTS*NSERVERS	7*NCLIENTS + 8*NCLIENTS+NSERVERS	NCLIENTS, NSERVERS, BUFFERSIZE

Stated Properties

safe	✗	free choice	?	event graph	?
deadlock	✗	state machine	?	reversible	?

Other Properties (not mandatory)