

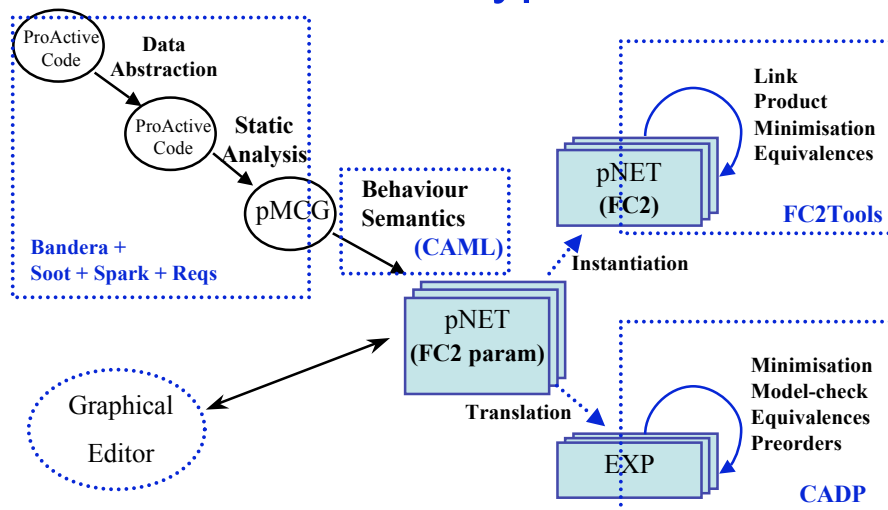
Tools for verifying distributed systems

Tomás Barros
OSCAR Workshop

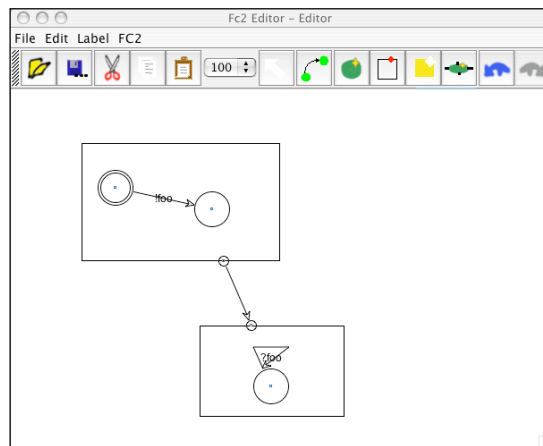
November 2004



Prototype tools

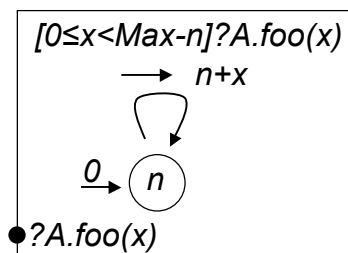


Graphical Editor

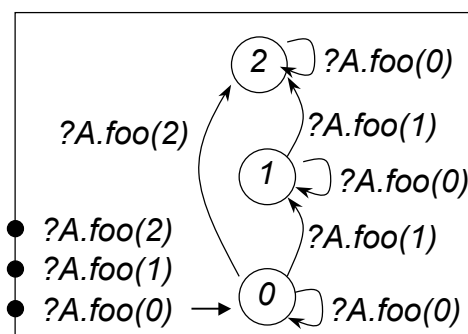


Generating Instantiations

$Max = 2$
 $n: [0, Max]$

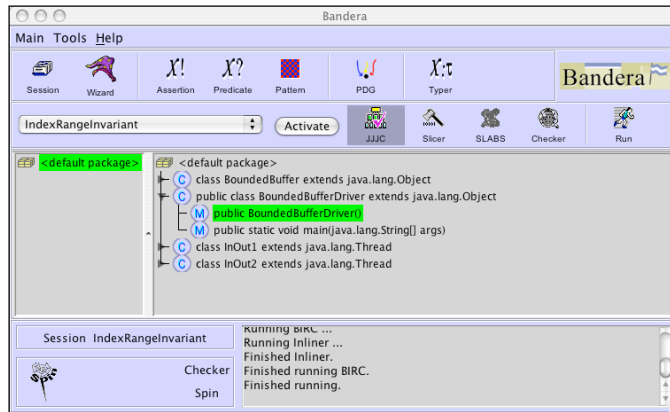


Fc2Parameterized



Slicing & Abstractions

Bandera



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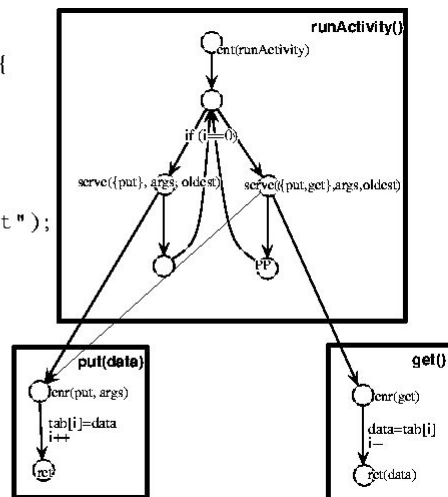
p. 5

Extended Call Graphs

```
public void runActivity(Body body) {
    int bound;
    Type [] tab;
    {
        while (true) {
            if (bound==0)
                service.serveOldest("put");
            else
                service.serveOldest();
        }
    }

    void put (Type data) {
        tab[bound++]=data;
    }

    Type get(){
        return (tab[bound--]);
    }
}
```

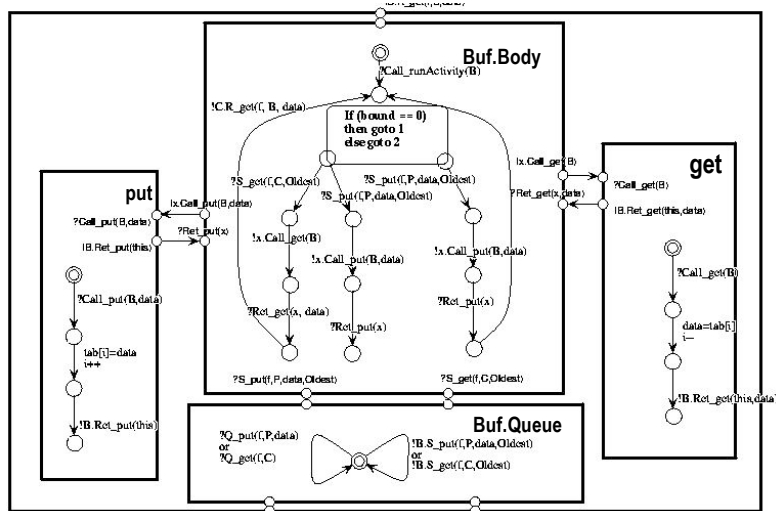


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p. 6

Buffer Network

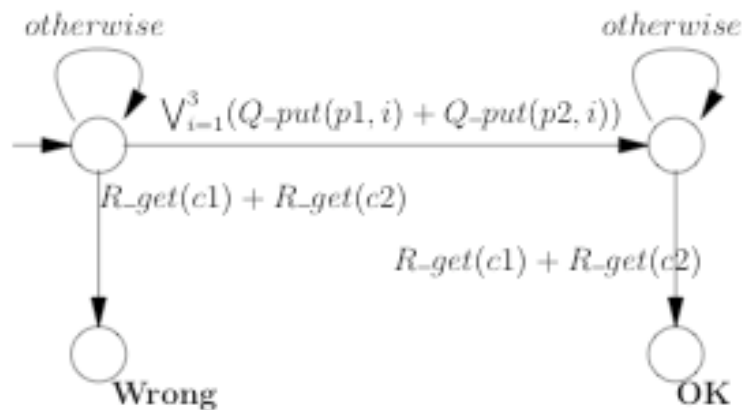


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p. 7

FC2Tools: Properties



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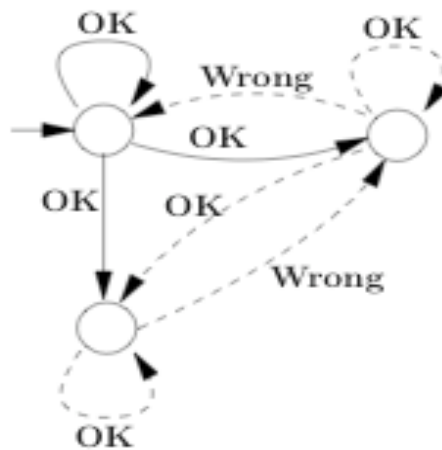
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p. 8

FC2Tools: Result

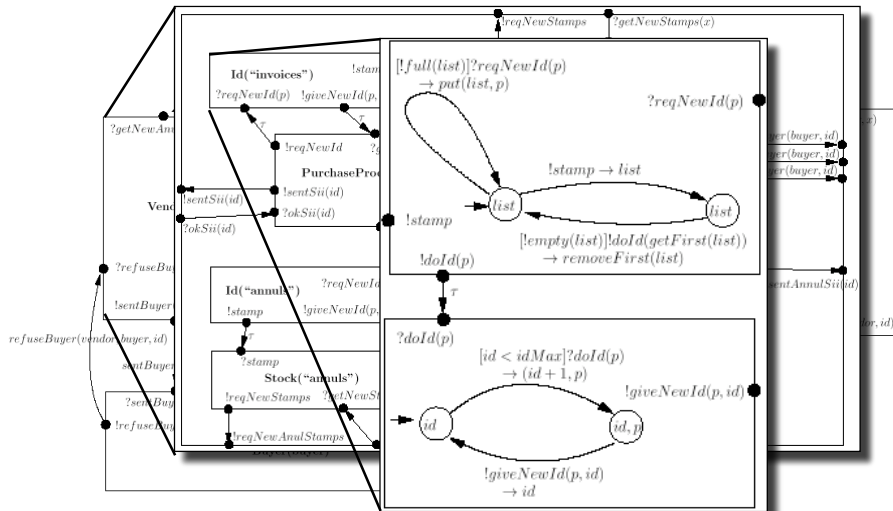


CADP

- On-the-fly model checker Evaluator
- Synchronisation Product (new)
- Properties
 - CTL, μ -calculus

FC2EXP

Case Study: Electronic Invoices at Chili



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Perspectives

- Integration of the tools
- Language & graphical language
- Integration to existing verification tools
- Component behaviours

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