



# ETSI 3rd GRID Plugtests™ CoreGRID Conference 30 November 2006 Sophia Antipolis

## N-Queens and FlowShop results

Patrick Guillemin – ETSI TC GRID – contest jury

<http://www-sop.inria.fr/oasis/plugtest2006/Providers.html>



# 2006 FlowShop contest

- ❑ Goal of the FlowShop contest
  - Solve the 10 Taillard instances with 20 jobs and 20 machines
  
- ❑ 2005 FlowShop contest
  - The winner was POZNAN PUTat3AM - POLAND (4 581s)
  
- ❑ 2006 FlowShop contest (4 teams)
  - BUPT – Beijing University - China
  - Kanban System - University of Tokyo - Japan
  - *POZNAN OUTPUT - Poland*
  - *POZNAN PUTat3AM – Poland*
  
- ❑ **The winner is Kanban System: 553 s, 207 workers**
  - *Beating 2005 FlowShop contest record*
  - BUPT: 13 760 s, 86 workers



[www.lifl.fr/OPAC](http://www.lifl.fr/OPAC)

# 2006 N-Queens contest



## □ Goal of the N-Queens contest

- Solve the maximum number of N-Queens solutions in 1 hour
- On a maximum number of machines
- With the most efficient algorithm

## □ 2005 N-Queens contest

- The winner was LSC/UFSM – CHILE ~2 202 *Billions* solutions
- 1106 Workers deployed
- Counted N=21 Queens in 13mn

## □ 2006 N-Queens contest (10 teams)

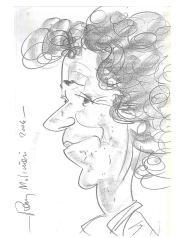
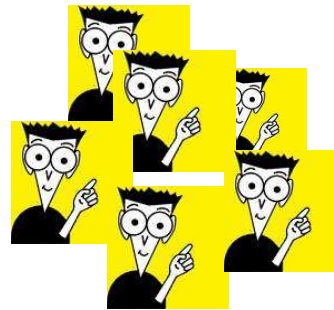
- Eight Samurai - University of Tokyo – JAPAN
- FIT – Tsinghua University - CHINA
- BUPT – Beijing University - CHINA
- VU – Vrije University - NETHERLANDS
- ChinaGrid – CHINA
- MOAIS/Kaapi – FRANCE using direct login
- UDP - Diego Portales University - CHILE
- LSC/UFSM – BRAZIL
- POZNAN PUT@3AM - POLAND
- POZNAN OUTPUT - POLAND

## 2006 N-Queens contest

- ❑ The 3rd ProActive Prize winner is VU – Vrije University
  - Calculated N=22 Queens in 27mn
  
- ❑ The 2nd ProActive Prize winner is ex-aequo BUPT and FIT with ~5 000 Billions solutions found on ~680 workers
  
- ❑ The 1st ProActive Prize winner is Eight Samurai with ~6 467 Billions solutions found deployed on 2193 workers
  
- ❑ The « Prix special du Jury » is MOAIS/Kaapi
  - Calculated 8 times N=22 Queens ~21 528 Billions solutions in 4600s (1h16mn) on 1348 Workers
  - Computed N=22 Queens in 488s (8mn8s)
  - And N=23 Queens ~24 233 Billions solutions in 4 415s (1h13mn)



# THANK YOU !



30 November 2006

## 1st CoreGRID Industrial Conference

## Background Slides

**BUPT: Beijing University of Posts and Telecommunications**

**FIT: Future Internet Technology, Tsinghua University**

**Kanban System and Eight Samurai :**

**Department of Information and Communication  
Engineering University of Tokyo**

**Poznan University of Technology**

**MOAIS/Kaapi <http://moais.imag.fr>**