



**IDGF-SP**

**International Desktop Grid Federation -  
Support Project**

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A large, stylized globe of the Earth is the background for the central text. The globe is rendered in shades of brown, orange, and yellow, with a textured, almost painterly appearance. The continents are visible but not detailed.

**Financial aspects  
of Crowd computing,  
summary of IDGF-SP findings**

Crowd Computing 2014, Almere, September 25th 2014

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Sony Computer Science Laboratory Paris

IDGF-SP is supported by the FP7 Capacities Programme under contract nr RI-312297.

- **Collect and analyse data to support the use of Desktop Grids. Give evidence based answers.**
- **Continue work on Green Desktop Grids**
- **Analyse financial benefits of Desktop Grids**

**Example: cost of a data center:**

**€0.03 core hour to €0.07 core hour**

Ref.: Financial Study for Sustainable Computing e-Infrastructures, e-Fiscal project.

# Example: cost of a major volunteer computing project:

**€0.00009 core hour**

Contributed computing power (2012): 374,228 years of CPU time.

Infrastructure cost: 160,000 € / 3 years, or 53,300 € / year

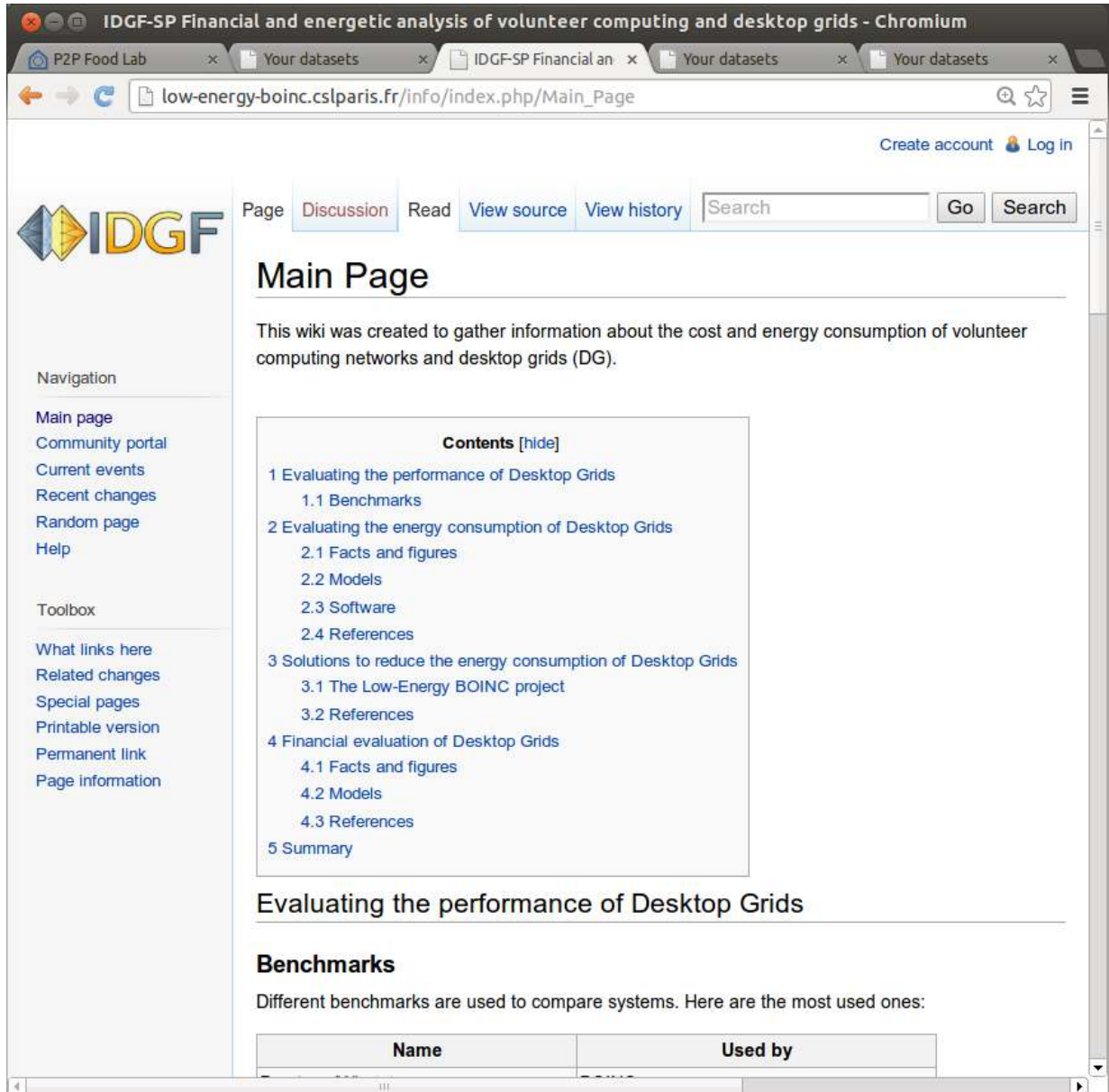
(2 small servers: 2 x 6,000; 2 large servers: 2 x 30,000; VMware infrastructure: 88,000)

Personnel cost (includes all costs): 240,000 € / year

Provide/collect financial estimate of Desktop Grids. With this data, we elaborate simple financial models to further promote the use of Desktop Grids.

## Document:

- a. Models
- b. Measurements
- c. Case studies
- d. Literature



The screenshot shows a Chromium browser window with the following details:

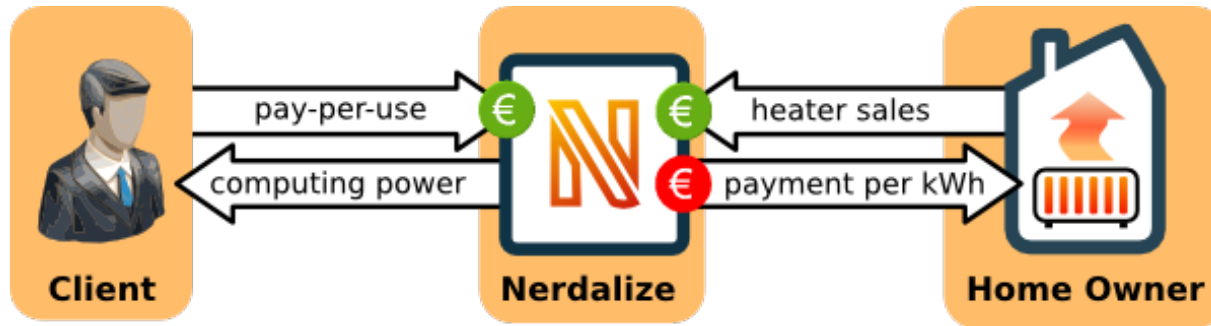
- Page Title:** IDGF-SP Financial and energetic analysis of volunteer computing and desktop grids - Chromium
- Address Bar:** low-energy-boinc.csiparis.fr/info/index.php/Main\_Page
- Navigation:** Discussion (selected), Read, View source, View history, Search
- Page Content:**
  - Main Page:** This wiki was created to gather information about the cost and energy consumption of volunteer computing networks and desktop grids (DG).
  - Contents [hide]:**
    - Evaluating the performance of Desktop Grids
      - Benchmarks
    - Evaluating the energy consumption of Desktop Grids
      - Facts and figures
      - Models
      - Software
      - References
    - Solutions to reduce the energy consumption of Desktop Grids
      - The Low-Energy BOINC project
      - References
    - Financial evaluation of Desktop Grids
      - Facts and figures
      - Models
      - References
    - Summary
  - Evaluating the performance of Desktop Grids:**
    - Benchmarks:** Different benchmarks are used to compare systems. Here are the most used ones:
 

Name	Used by

- 1. Contributed computing power  
(average number of machines/CPU's x time)**
- 2. Infrastructure cost  
(servers, electricity, network connection)**
- 3. Personnel cost**

# Start-ups based on combined heat and computing units

## Nerdalize



## Qarnot computing



## Stimergy.com: electrical water heaters



**Stimergy**

Infrastructure Numérique Responsable

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547K

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+ 30,000 office  
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partner in Hong  
Kong.







<http://idgf-sp.eu>

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