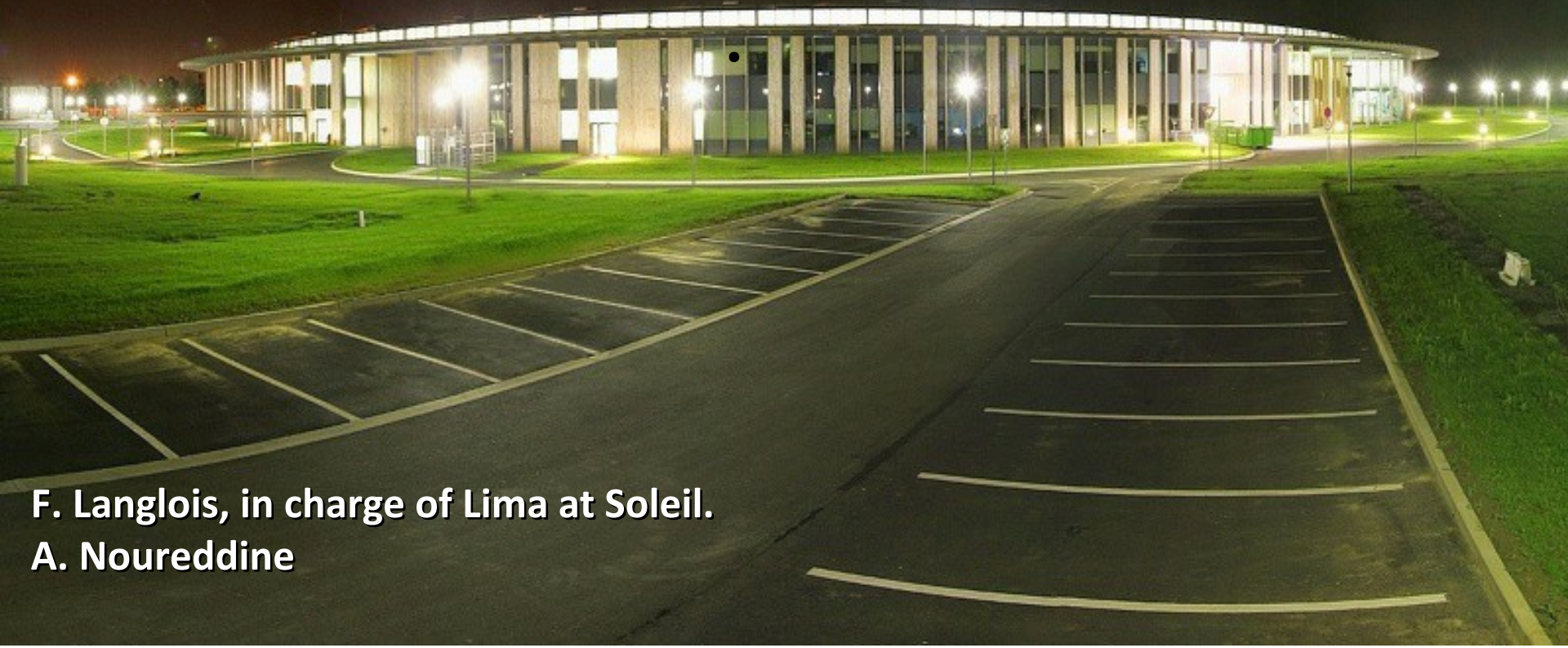




# Lima @ Soleil

Lima Workshop 21-22/03/2013 - ESRF



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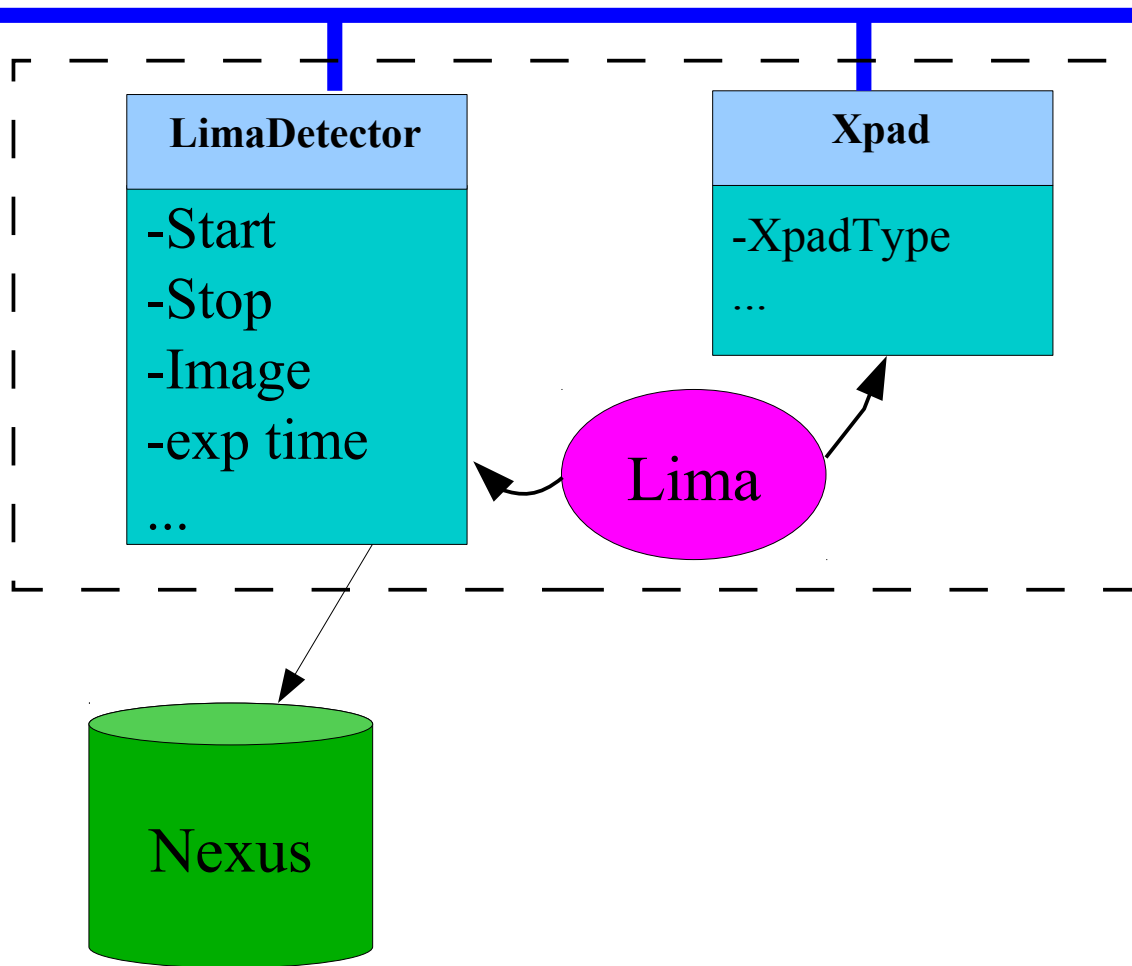
- **History**
- **Architecture**
- **Some figures**
- **Strengths of Lima and the collaboration**
- **Difficulties / Possible improvements**
- **Design modifications**

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- **Inventory of internal Soleil solutions (3): start of 2010**
- **Need of a common “thing”**
- **Inventory/tests of external solutions**
  - AreaDetector
  - Lima
- **Choice of Lima : June 2010**
- **Signature of a “Gentleman Agreement” between Soleil and ESRF**

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## Tango



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- **In production: 47 camera**

- 35 Basler (scout, pilot)
- 1 Pilatus 6M
- 1 PCO (edge) (Win)
- 3 Princeton (Win)
- 1 PerkinElmer (Win)
- 4 Xpad
- 1 ADSC
- 2 Prosilica

- **Soon in production:**

- Marccd
- Maxipix

- **To Do:**

- Aviex
- PixelFly
- Eiger

→ **At Soleil : big amount of data come from Lima !! this is a critical component !**



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- It works !
- PCO , Prosilica, PerkinElmer : 1 day
- ESRF support and reactivity
- Good communication (Visio conf, mailing list ...)
- Growing community (see github forks)
-

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- **Entry ticket: expensive**
- **Different Tango Clients**
  - Work done several time
  - Tango clients don't do the same thing (state, image...)
- **Quality**
  - Core Regression tests ?
  - Plugin Reg Tests
    - eg marccd: esrf → OK, Soleil → Not OK: why?
    - With a standard interface
    - Independent from a control System (Tango, Taco)
  - Documentation
    - Doxygen (not working on blissgarden)
    - More comments in code (Core + Plugins)
  - Static analysis of the code (tools like cppcheck ...)

- **Quality (cont'd)**

- Non usage of third-party libs (yat, diffimage) increase the size of the Lima code → increase the maintenance cost
- Coding rules
- More use of the Bugtracker (epn?) : eg not all Lima users are registered

- **Tag policy**

- We have to agree on a Tag policy
- Currently: no tag on plugins
- A plugin responsible should be responsible of Tagging it
- The Core and the plugins are too much linked
- Core and plugins have different life cycle → their tags should not be linked

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- **BufferCtrl/Mgr**
  - Too complicated ?
- **Using classes**
  - For image file reading
  - File saving (EDF/NXS ...)

- Introspection

- To have a real generic client :

```
my_camera_basler    = new Basler::Camera(camera_ip, packet_size);  
my_interface_basler = new Basler::Interface(*my_camera_basler);  
my_control          = new CtControl(my_interface_basler);
```

```
Roi myRoi(0,0,100,100);  
my_control->image()->setRoi(myRoi);
```

```
my_camera    = new Camera("Basler");  
my_camera->get_parameter_list(ParamList);  
my_camera->set_parameter(Param[0],Value[0]); // with Param[0] == "IP";  
my_interface = new Interface(*my_camera);    // Value[0] == "192.168.0.1";  
my_control   = new CtControl(my_interface);
```

```
Roi myRoi(0,0,100,100);  
my_control->image()->setRoi(myRoi);
```

- AtkPanel
- Cf libuca



- **Soleil → continue to work with Lima**
  - Ressource if needed
- **But**
  - Next versions should take into account the quality requirements (doc, tests, design...)
- **Have a look at:**
  - Micro-Manager (<http://valelab.ucsf.edu/~MM/MMwiki/>)
  - AreaDetector (<http://cars9.uchicago.edu/software/epics/areaDetector.html>)
  - Libuca (<http://ufo.kit.edu/software.html>)

**Thank you for your attention!**