

## SANS Status

More info on our public release page:

<http://danse.chem.utk.edu>

- Group news
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## Group news

- The SANS group is now back to having 2 full-time people on staff.
- Gervaise Alina is with UT since Feb 11. She's a recent graduate of Computer Engineering from Virginia Tech.
- We are still on the lookout for another programmer to start at the beginning of Year 3.

## Highlights of activities since last meeting (Sept 07)

- Finished 2D scattering intensity simulation of real-space models.
- Finished our 1<sup>st</sup> collaboration task with the IGOR NIST group. We provided them with 2D modeling code that will be part of their next analysis package release. We are still in discussion for further collaboration.
- Started working on requirements for magnetic analysis.
- Released SliceView 0.1 (demo tomorrow)
- Started initial work on SliceView 0.2

## Plans for 2008

Key activities for 2008:

- SliceView will be extended to include prototyping activities for our second flagship application.
- Production of our first flagship application will start.
- PARK will be fully integrated in SANS software.

# Complete SANS Release Plan

Prototypes for requirements gathering (selected functionality):

- Real-space simulation \* [completed]
- Shape-based model analysis [SliceView 0.1] [completed]
- Shape-independent analysis [SliceView 0.2] [just started]
- Experimental planning tools [starts 1/09]

Roll-out of applications (full functionality):

- Shape-based model fitting analysis [starts 6/08]
- Shape-independent analysis [starts 4/09]
- Experimental planning tools [starts 3/10]

\* We still have an issue with 3D graphics for real-space simulation



## Towards SliceView 0.2

SliceView will also be the prototype for our second requirements gathering effort.

The final set of flagship applications might very well be packaged as a single application with different “views”, so the current activities will also be addressing that aspect.

The updated version will include:

- Non-shape based modeling (Guinier, Porod...)
- PARK fitting
- “Constrained fitting”

Timescale:

- The final prototype will be released in December 2008.
- We will follow an iterative release process as we did so far.

## Towards our first real flagship application

Starting in June 2008, we will implement the first SANS flagship application.

- It will be inspired by SliceView.
- It will hopefully be based on whatever GUI framework DANSE comes up with.
- Fitting will be PARK-based.
- We are aiming to satisfy most of the requirements we gathered throughout our prototyping work (available on our wiki).

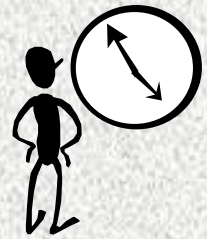
## Impact: users & papers

- Download stats:
  - SliceView <= 0.0.2 tutorial 133 [2007]
  - SliceView 0.1 tutorial 31 [2008]
  - Developer's meeting status report 39 [2007]
  - canSAS meeting slides 10 [2007] 7 [2008]
  
  - SliceView 0.0.1 [Win] 5 [2007]
  - SliceView 0.0.2 [Win] 10 [2007]
  - SliceView 0.0.2 [Mac] 7 [2007]
  - SliceView 0.1.7 [Win] 2 [2008]
  - SliceView 0.1.7 [Mac] 1 [2008]
- Conferences and papers from users:
  - Porcar & Pozzo, 81st Colloid & Surface Science Symposium, June 2007
- Conferences and papers from SANS team:
  - canSAS-V, Oct 2007
  - 81st Colloid & Surface Science Symposium, June 2007
- User feedback:
  - We are starting to get unsolicited feedback from outside NIST!



# Issues

The clock is ticking for  
cross-project dependencies



- Windows releaser

The SANS and Refl groups are looking for a solution to easily deploy apps in the form of *executables* with shared packages and share base framework.

- 3D graphics

We need a solution for simple 3D graphics (shapes on a canvas).

- Common application framework

Delays in producing a usable pyre framework for our applications will impact our schedule. Issues are:

- The life-cycle of pyre components is better suited for batch processing (7/2007).
- We haven't seen any new development of Pyre since the last review.

Application building starts 6/2008... we need to know the plans now.  
Having a framework would make it easier to use packages like PARK.

- Common DANSE UI package? AUI-based?

We were hoping for a common DANSE framework (9/2007).

This will have a negative effect on our schedule if nothing is done.

- How do we organize the release in terms of released apps?

# Windows Releaser

Assumptions: Users should not have to install python. Installation should start with a single double-click.

The traditional way: Use py2exe and ship one big bundle that includes your code and python. Every application has its own python bundled in.

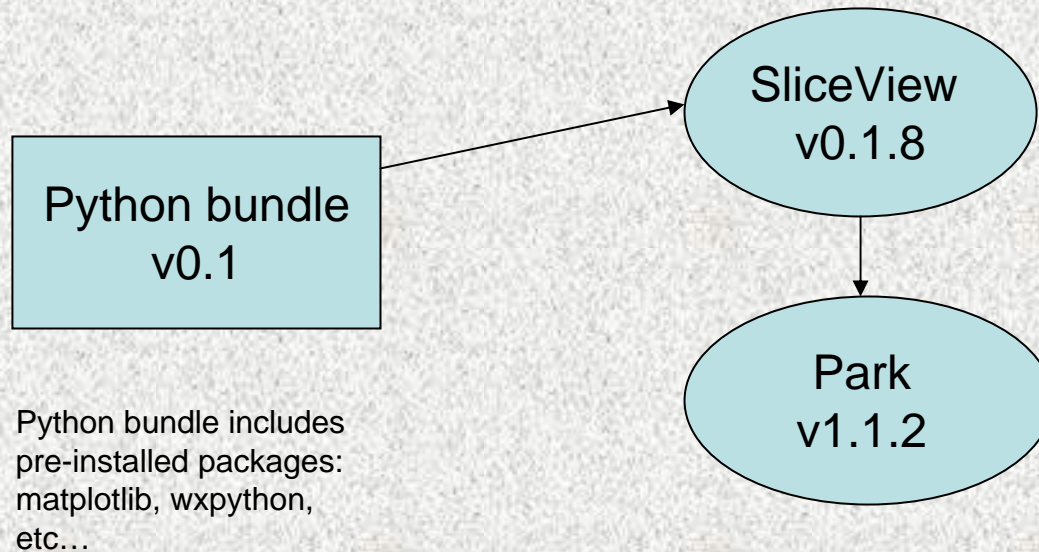
Requirements for a new system:

1. Applications should share python, which should not be redistributed with each installer.
2. Users should not have to install Python.
3. DANSE code should be deployed as versioned packages.
4. Python would also be such a versioned package.
5. The installer will look at what package is installed, check the version, and install the missing ones.
6. The system should keep logs to enable uninstallation.
7. The system should be built with package upgrade in mind.
8. The developer is responsible for telling which versions of the packages he needs to build his application.
9. Scripts should be available to easily build the releaser.

# Windows Releaser

```
C:\> install_sliceview.exe
```

The installer downloads compatible versions of the python bundle and the necessary packages...



Execution is done by using the python bundle...

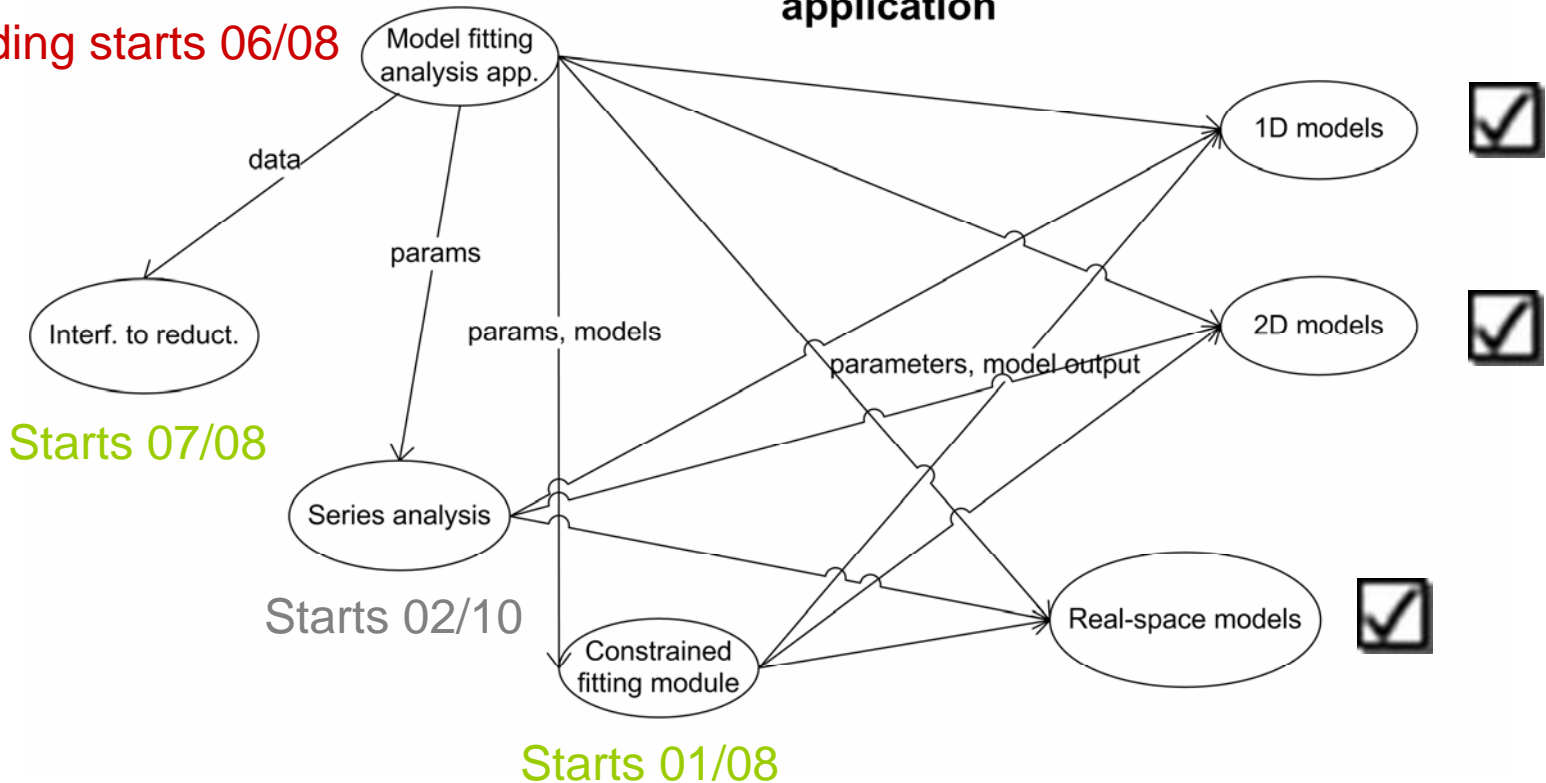
```
C:\> pypak.exe sliceview.py
```

# Flagship 1: Shape-based fitting application

Building the application with the building blocks we are producing

## Model fitting analysis application

Building starts 06/08



# Flagship 2: Shape-independent fitting application

