Enhancements

- New rtrace -n option for multicore
- Multiprocessing rad -N now calls rpiece on single view
- Made dctimestep more general
- Created genBSDF script to simulate transmission through complex systems and pass geometry to mkillum
New **rtrace -n** option

- Employs new rayfifo.c module
- re-sorts parallel-rendered rays
- Works with **-I** option
- Linear speed-up, unless **-x** used
- flushing requires clearing queue

**Caution:** trace output is confused
Example

```
rtrace -n 4 -ab 3 -omsv scene.oct \  
< samps.dat > results.dat
```

NOT: Order not preserved  Flush delays

```
rtrace -n 4 -ab 3 -otms -x 2 \  
scene.oct < in.dat > confusion.dat
```
Only one view (e.g., -v option)

Splits image into M\times M segments

\[ M = \text{floor}(8 + N/3) \]

Handles recovery if process dies

be careful to use same \texttt{rad} options
Example

```bash
rad -N 2 -v ceil scene.rif
echo 8 8 > rpsync_ceil.txt
rpiece -F rpsync_ceil.txt -PP pfOWLd2E -vf ceil.vf -x 2048 -y 2048 @run.opt -ps 4 -pt .08 -o scene_ceil.unf scene.oct
rpiece -F rpsync_ceil.txt -PP pfOWLd2E -vf ceil.vf -x 2048 -y 2048 @run.opt -ps 4 -pt .08 -o scene_ceil.unf scene.oct
```
Improved dctimestep

Used before with BTDF matrix:

dctimestep coef%03d.hdr blinds1.xml SouthGroup.dmx sky1.dat > result1.hdr

Now, without a BTDF:

dctimestep coef%03d.hdr sky1.dat > result1.hdr

Like pcomb, but much faster

suggestion & initial implementation by Andy McNeil

works for matrices & vectors, also
New **genBSDF** Script

- Uses `rtcontrib` to compute scattering function for window system
- Initial implementation BTDF only
- Passes geometry to XML output
- Overcomes limitations in `mkillum`
Example

genBSDF blinds1.rad > blinds1.xml

• Geometry must be oriented in standard coordinates (+Z into room)
• Input may be Radiance or MGF
Funding Situation

For the first time in many years, I can say that Radiance funding is at a reasonable level.

LBNL hired 1.5 FTEs (Andy and Randolph) and pays me at 1/4 time.

Program Head (Steve Selkowitz) is looking to coordinate efforts with other software developments at lab.
Questions?