# Seminar demonstration files

## Overlays (I)

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## 1 – Introduction

- **Overlays** are a key feature for interactive screen presentations
- **Seminar** implement since it beginning a powerful mechanism for the management of overlays (in fact, it is only an encapsulation of the general PSTricks mechanism for overlays, implemented in the PostScript language – but such a mechanism is really useful only for slides!)
- It was written to be able to generate several plastic slides which will be superimposed on a projector. Nevertheless, exactly the same mechanism work too for screen oriented presentations.
- The overlays also allow to compose **animated graphics**, if the PDF file viewver allow to show the slides automatically (as Acrobat Reader does) – see sem-dem6.pdf
- The only change that we made concern the total number of overlays allowed on the same slide: we increase the limit from 10, which is clearly not enough for screen presentations, and specially for animated graphics, to 676 ($26^2$)





- The key point is to have special macros for the two kinds of overlays which are important: **cumulative** and **progressive** ones:
  - `\SeminarCumulativeOverlays` will define cumulative overlays, with each new one added to the preceding (due to the PSTricks implementation of overlays[a], this way doesn't allow to use nodes inside the overlays: rather use the `\SeminarAltCumulativeOverlays` macro in these cases),
  - `\SeminarProgressiveOverlays` will define progressive overlays, where the first slide is kept but each new one will replace the preceding (for the same reason, we must rather use the `\SeminarAltProgressiveOverlays` if PSTricks nodes are used inside the overlays),
  - It is possible (but not very user friendly...) to program other behavior, if needed, and to keep some overlays permanently when they have appeared, but not the following ones. For this, you must redefine the PSTricks `\pst@initoverlay` macro. See the example of the moving objects in a table in the animated graphics demonstration file (you must obviously look at the source code).

[a] For technical explanations, see the pages 243–244 in Timothy van Zandt and Denis Girou, `Inside PSTricks`, TUGboat, Volume 15, Number 3, September 1994, pages 239–246, available on `http://www.tug.org/TUGboat/Articles/tb15-3/tb44tvz.ps`

# Demonstration of overlays (i)



- We also add a simple macro `\SeminarNextOverlay` macro, which is only the uasage of the standard `overlay` environment, with an automatic management of the counter
- We can show the pieces of a slice in any order, just numbering accordingly the overlays, (see the example on slide 9), but this is also easy, for instance, to use the simple macro `\SeminarItemInOverlay` which redefine the `\item` macro of the various lists environments, to automatically have each one on the next overlay (see the example on slide 10)



# Demonstration of overlays (i)



- As usual with (LA)TEX, take care to **spurious blanks**, which are one of the most common pitfalls in some circumstances. Always end the `overlay` environments with a percent sign, %, to not introduce an unwanted blank and change the position of the material formatted in the next overlays:

```
    \begin{overlay}{3}
      ...
    \end{overlay}%

...

    {\overlay{6}%
      ...}%

...

   \SeminarNextOverlay{...}%
```

- To show not only the slide number but also the overlay number, use the `page` counter rather than the `slide` one (see the example on slide 10 in the PDF file):

```
\fancyhead[R]{\thepage}
```



# Demonstration of overlays (i)



- Obviously, we can also play with the transitions seen elsewhere (sem-dem2.pdf) when showing the overlays
- Another important point is of course to suppress all the overlay mechanism for the paper version (this is what the `\SeminarPaperVersion` macro does, just inhibiting them with the `\overlaysfalse` macro)
- From the usage point of view, the important thing is to define the overlays **inside** a slide and not as several consecutive slides. Specially, this will allowed to generate a coherent paper version without trouble: as overlays are deactivated in the paper versions, we will simply got the cumulative result. For progressive overlays, this will be the same. But if we want to have, in the paper versions, only one state, we have to introduce a test. See examples in the demonstration file for animated graphics (which are based on overlays) on sem-dem6.pdf
- In some cases, it is not realistic to generate the overlays inside the same slide. A such special case occur when we want to build an animated graphic with a lot of external files. This would be prohibitive, in compilation time and/or size of the resulting file. For an illustration of such problem, see too the file sem-dem6.pdf



# Demonstration of overlays (i)



## 2 – Cumulative overlays

How to solve this problem?

- First, keep quiet
- Second, analyze carefully (I repeat –again and again and again and again and again and again and again and again– **carefully**) the situation:
  - what do you want yourself?
  - what are the interests of other people involved?
- Generally, just choose to do **nothing**...

**RESULTS**

**The winner is: Caroline**

**The second is: Jane**

**The third is: Mary**





Using the `\SeminarItemInOverlay` macro as explained earlier, we can have each entry of the lists in it own overlay.

- Jean RACINE:
  - → *Andromaque* (1667),
  - → *Les Plaideurs* (1668),
  - → *Britannicus* (1669),
  - → *Bérénice* (1670),
  - → *Bajazet* (1672),
  - → *Mithridate* (1673),
  - → *Iphigénie* (1674),
  - → *Phèdre* (1677).
- Pierre CORNEILLE:
  - → *Le Cid* (1637),
  - → *Horace* (1640),
  - → *Cinna* (1641),
  - → etc.





**A formula for $\Pi$ from Leonhard Euler**

$$\begin{aligned}\Pi &= \sqrt{6} \times \sqrt{1 + \frac{1}{4} + \frac{1}{9} + \frac{1}{16} + \cdots} \\ &= \left(6 \sum_{n=1}^{\infty} \frac{1}{n^2}\right)^{\frac{1}{2}}\end{aligned}$$





Table 1: Results of the year

| | | |
|---|---|---|
| 1st Quarter | 723 | |
| 2nd Quarter | 819 | + 13.3 % |
| 3rd Quarter | 687 | – 16.1 % |
| 4th Quarter | 894 | + 30.1 % |

Table 2: Results of the year

| | | |
|---|---|---|
| 1st Quarter | 723 | |
| 2nd Quarter | 819 | + 13 % |
| 3rd Quarter | 687 | – 16.1 % |
| 4th Quarter | 894 | + 30.1 % |





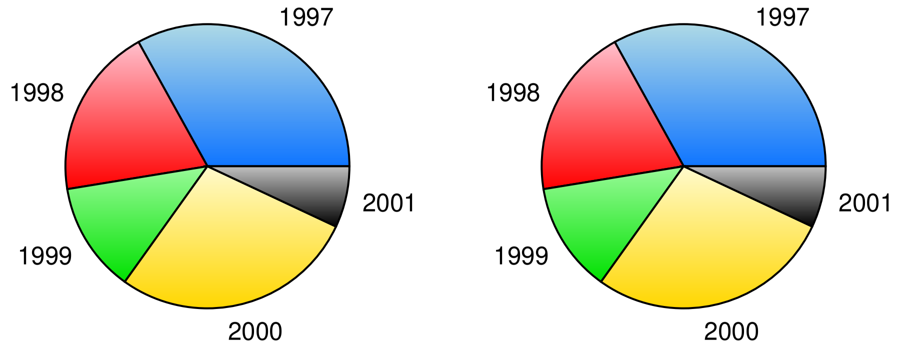

Figure 1: Results of the last five years





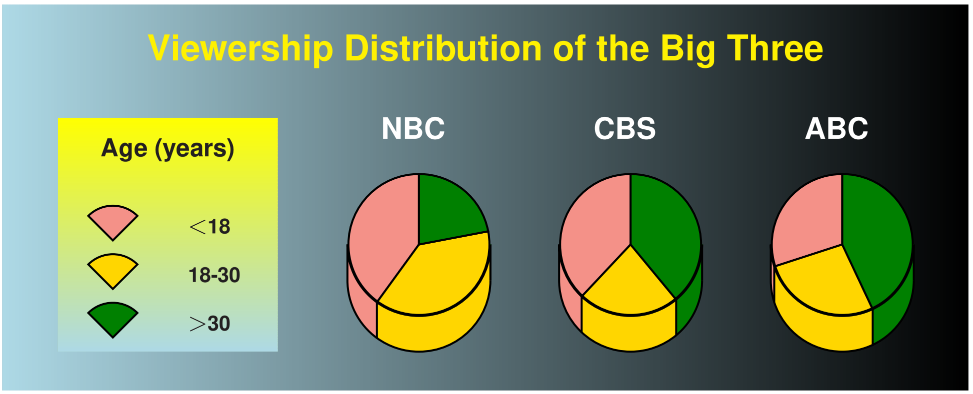

Figure 2: Main American TV channels





**3 – Cumulative overlays with PSTricks nodes**

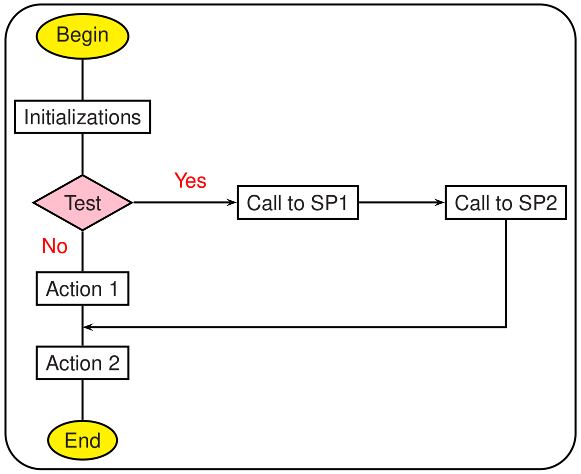

Figure 3: Flow diagram with the `psmatrix` environment

# Demonstration of overlays (i)



**4 – Progressive overlays**

- Miss
- Dear Miss
- Dear Catherine
- My dear Catherine
- Darling
- My sweet love
- My small rabbit
- My angry rabbit
- My naughty friend
- Farewell!



# Demonstration of overlays (i)



**5 – Progressive overlays with PSTricks nodes**

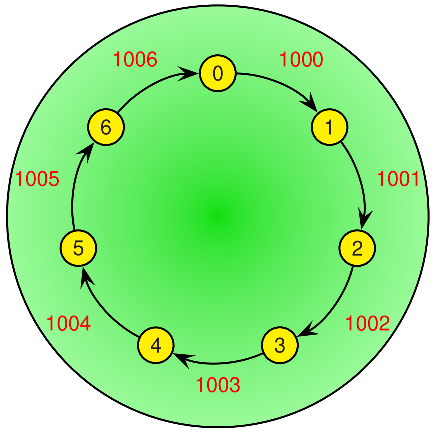


Figure 4: Communication ring



# Demonstration of overlays (i)



**6 – External files inclusion**

Figure 5: Louise Brooks (1906–1985)