SCIENCES SORBONNE UNIVERSITÉ

The event-driven loop

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As an introduction…

- **Initially, a «low level» mechanisms**
  - Management of the «serial line»
  - Network management (built-in in network cards)

- **As old as communicating systems**
  - A least

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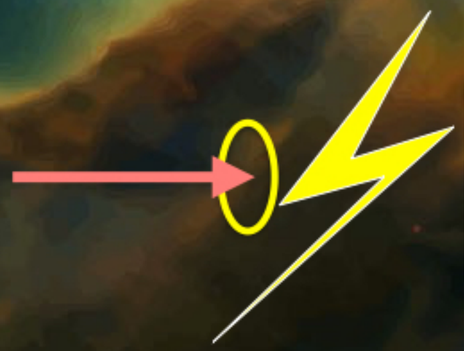
Principles of an event-driven loop

Structure



Be careful

there might be
shared information in the handler

Behavior

- `cpt` initialized to 0
- Progressive filling at every interruptions
  - **«Serial line», character by character**
- When buffer filled, transfert to the target actor
  - **e.g. when `cpt=512`**

Programming the handler

We need to mask interruptions

- Not disarm!
  - **What is the difference?**

```
begin
    mask (SER_LINE)
    buffer(cpt) := (REG_SER_LINE)
    cpt++
    if cpt = 512 then
       copy buffer to the target actor
       cpt := 0;
    end if
    unmask (SER_LINE)
end
```

As a conclusion…

- **Does it looks strange to you?**
- **Very classical in network-based systems**
  - Low level
  - Especially for slow networks
    - **3G? 4G? or even worse…**