



# Das FLASH Kontrollsystem

DESY Schichtgänger Ausbildung  
Operation 1

Raimund Kammering - MCS4 -



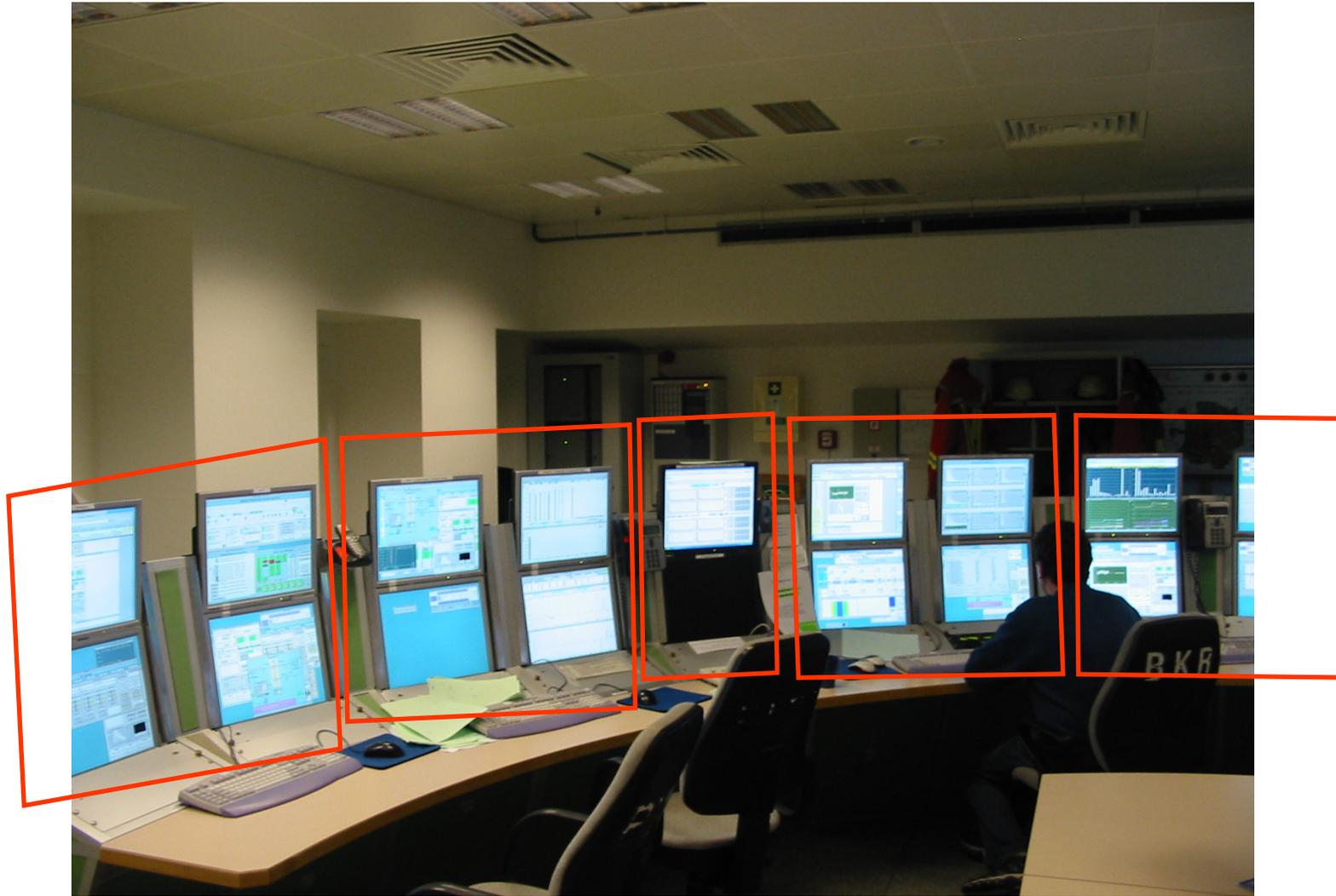
# Übersicht

- Der **BKR** und die **FLASH Konsolen**
- Von der **Arbeitsoberfläche** zu **DOOCS**
- **ddd** – das Fenster zum DOOCS
- Ein Beispiel (live):  
*Dokumentation eines XXX Events*
- Ausblick



# Der BKR und ...

FLASH  
Free-Electron Laser  
in Hamburg



tffbkr8

tffbkr7

windows

tffbkr6

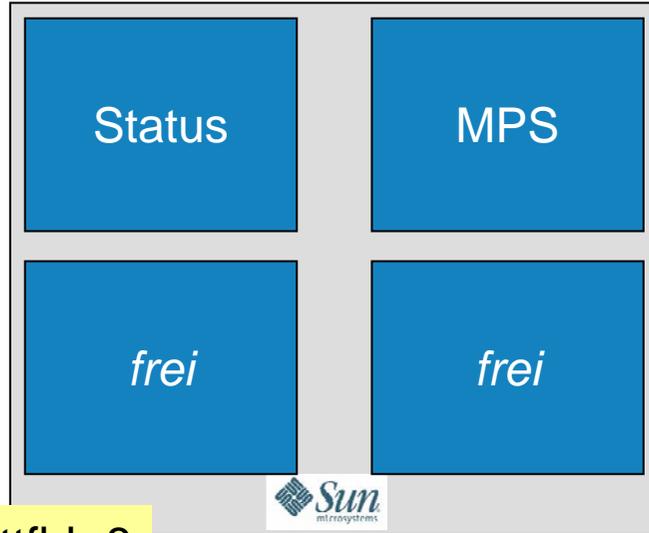
tffbkr5

...

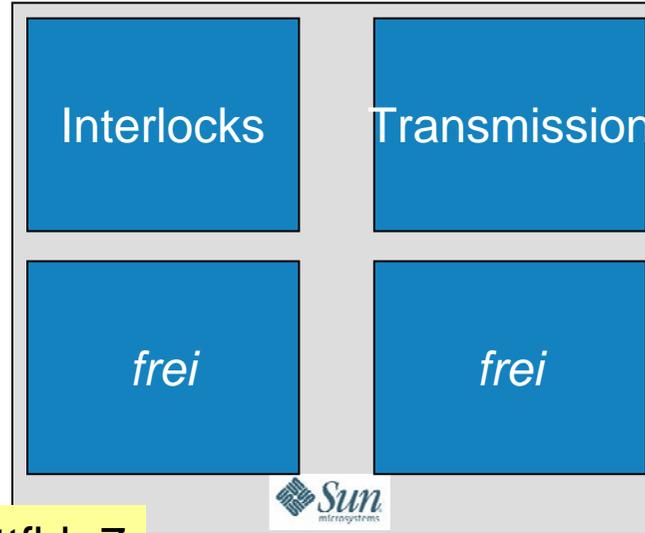


# ... die FLASH Konsolen

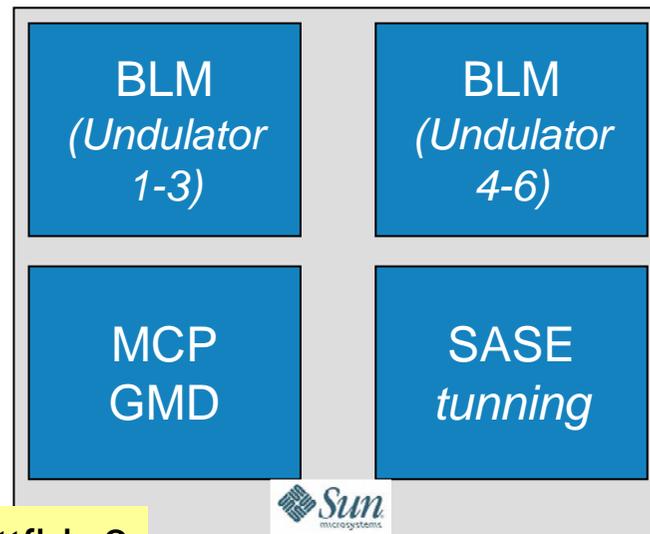
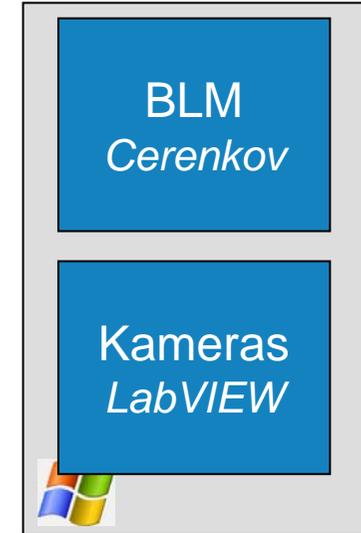
**FLASH**  
Free-Electron Laser  
in Hamburg



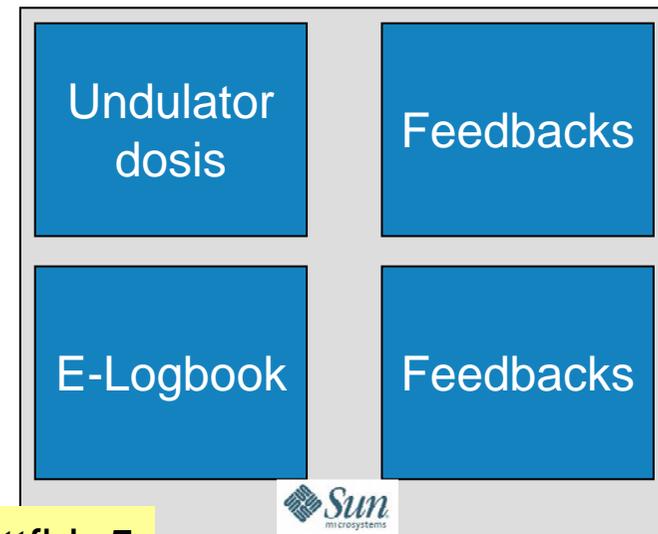
ttfbkr8



ttfbkr7



ttfbkr6



ttfbkr5



# ... die FLASH Konsolen

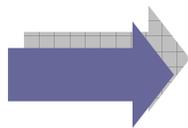
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## SUN Multiprozessor Desktop Rechner

Redundante Netzteile, Lüfter

Industriestandard Hardware  
Komponenten

(MVP/MCS) bekanntes  
Betriebssystem (SUN Solaris)



Sehr verlässlicher Betrieb  
(uptime ~ Jahre)



# Von der Arbeitsoberfläche ..

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- Alle Kontrollsystem Applikationen laufen unter „*TTF UNIX Account*“:

– **Benutzer:** **ttflinac**

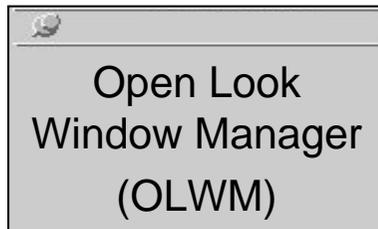
– **Passwort:** **XXXX (Operator fragen)**





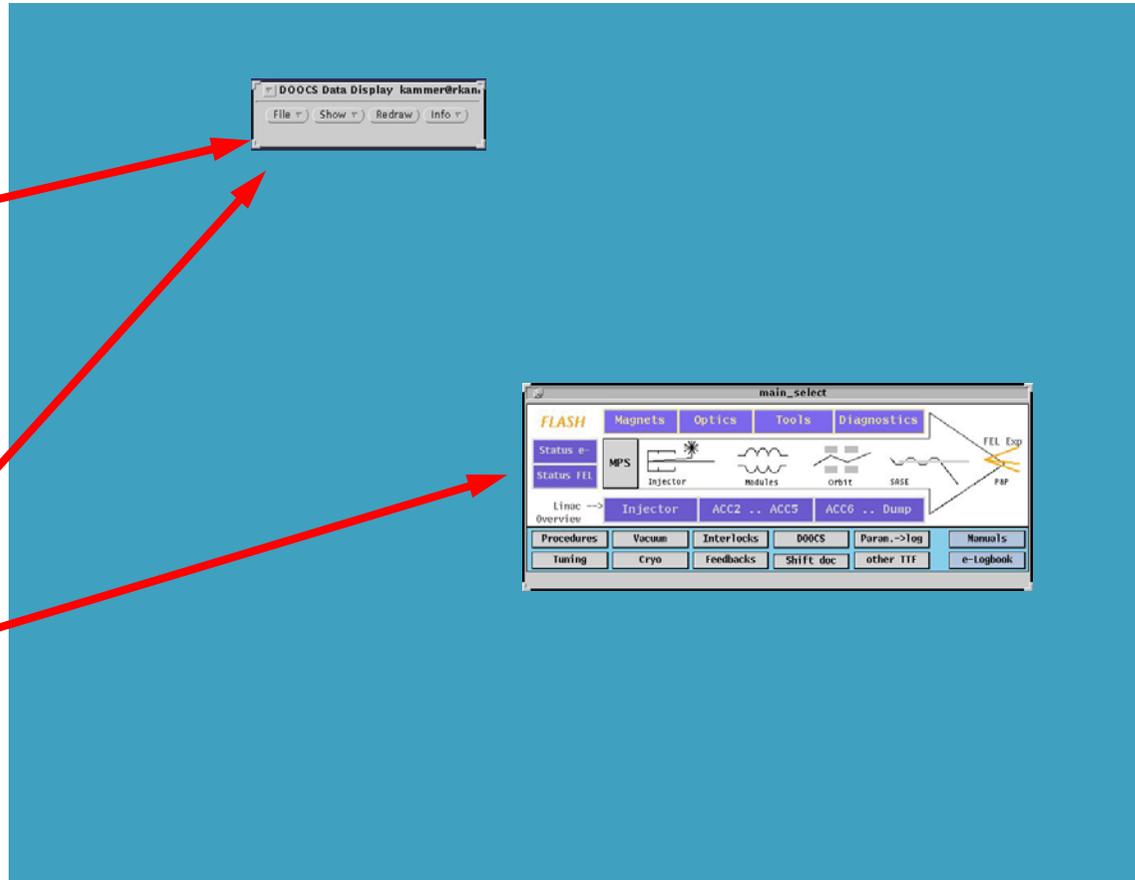
# Von der Arbeitsoberfläche ...

Sieht so aus...



oder so:

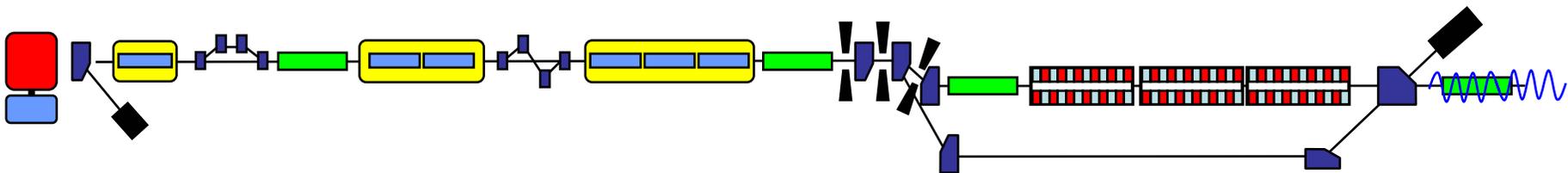
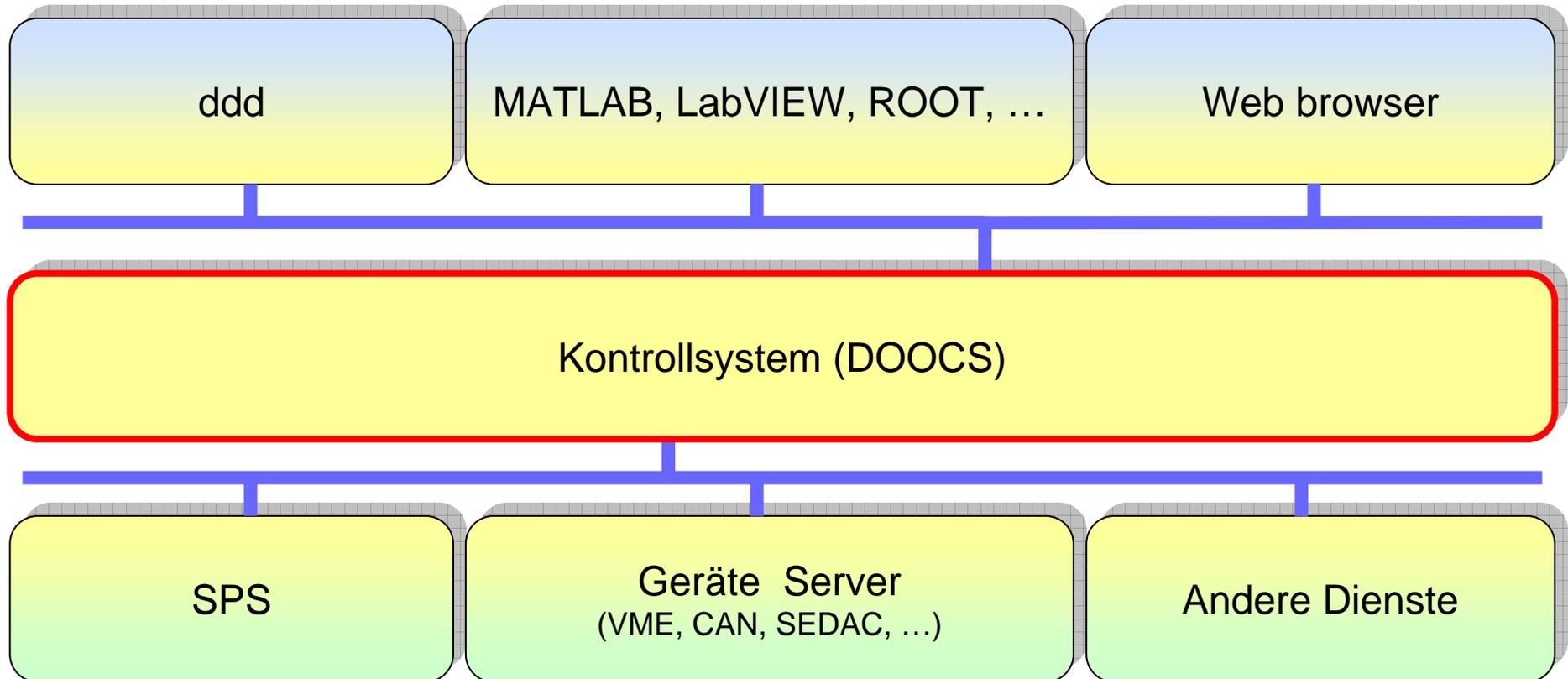
**ddd**





# ... ZU DOOCS

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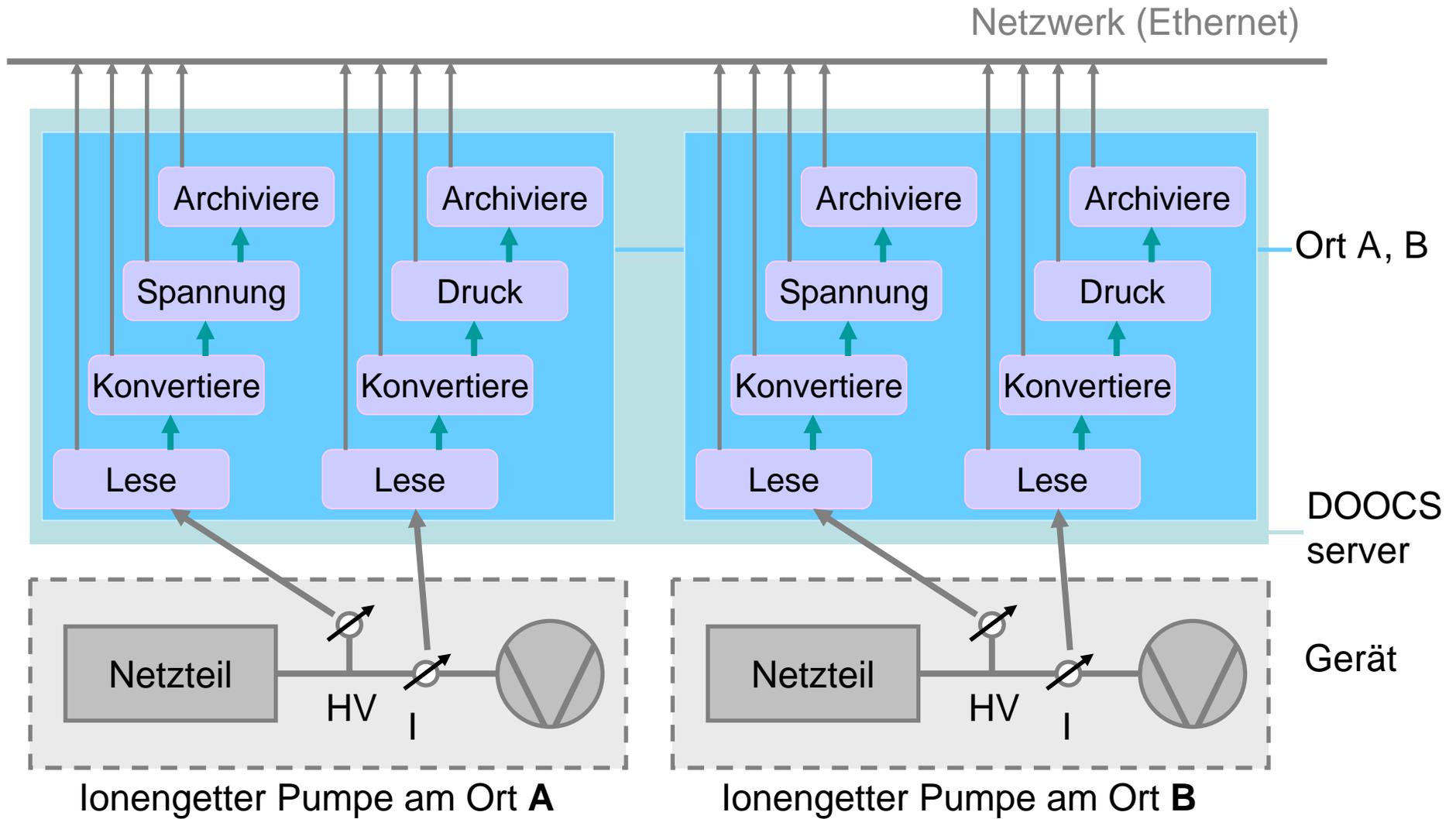
# ... zu DOOCS

- **D**istributed **O**bject **O**riented **C**ontrol **S**ystem
- DOOCS **steuert** und/oder **überwacht** die Hardware
- Bildet Hardware (Objekte) in C++ Klassen ab
- auch andere Kontrollsystem vorhanden
  - EPICS – Kryogenik, ...
  - TINE – Magnete

Siehe auch <http://doocs.desy.de>



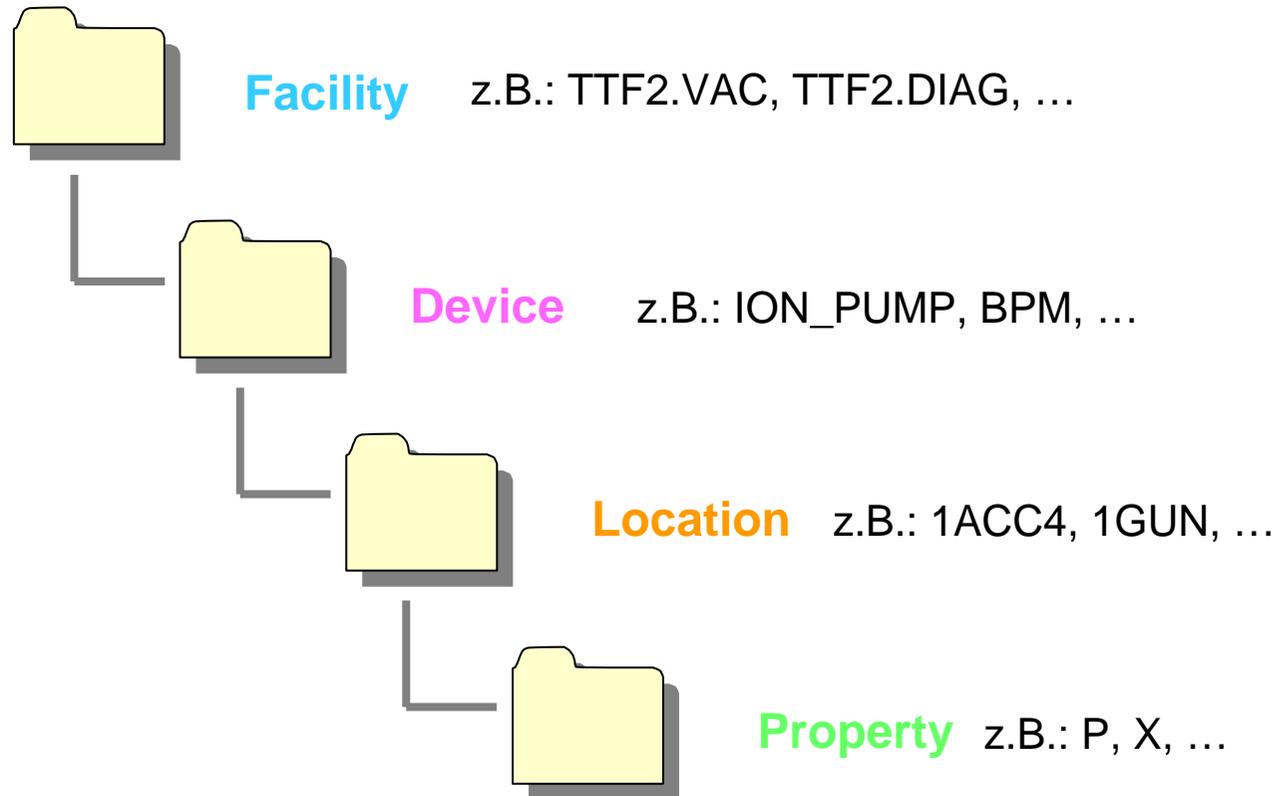
# ... zu DOOCS





# ... zu DOOCS

## Hierarchische Namensstruktur

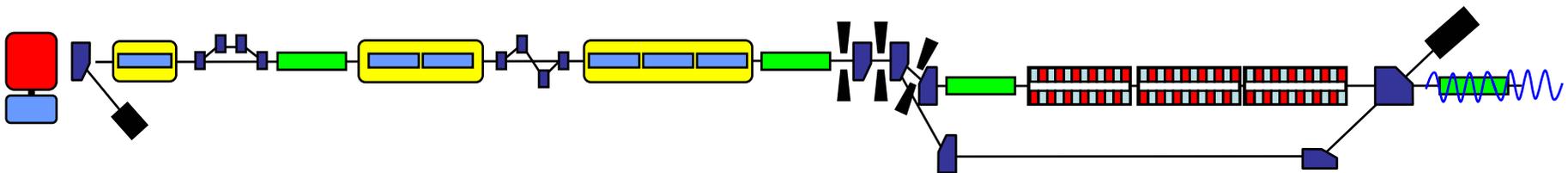
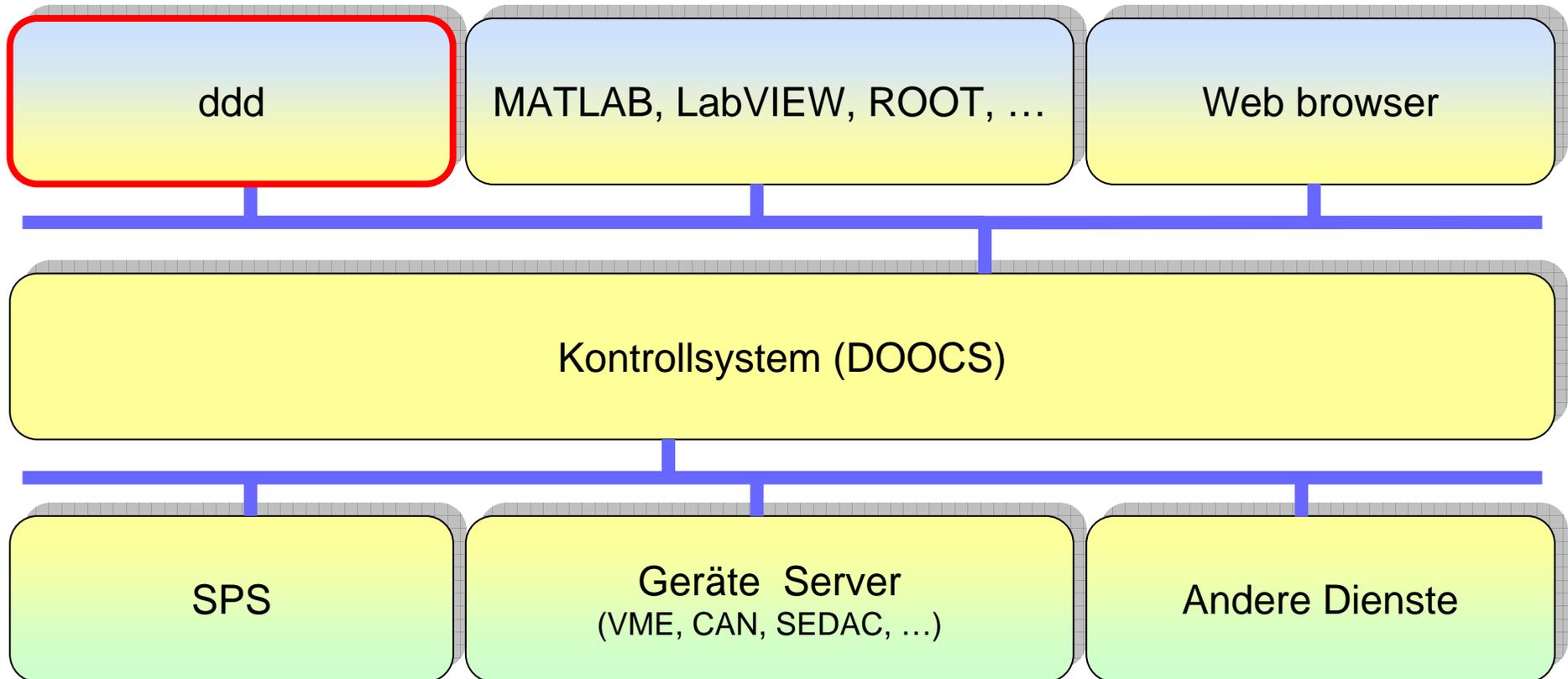


z. B.: **Druck einer Ionengetter Pumpe** am Eingang von **ACC4**

TTF2.VAC / ION\_PUMP / 1ACC4 / P  
*facility device location property*



# ... zu DOOCS





# ... zu DOOCS

ddd = **D**OOCS **d**ata **d**isplay  
Ist die Kontrollsystem Anwendung

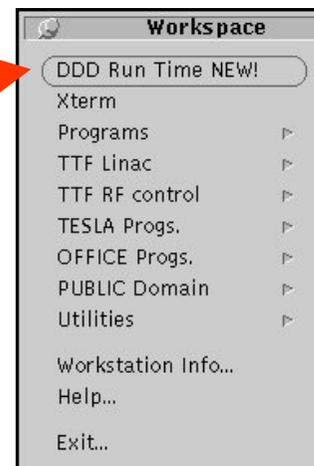
Starten über:

a) Terminalfenster:

```
Sun Microsystems Inc. SunOS 5.8 Generic February 2000  
ttfbkr5{ttflinac}1: ttf_ddd_run █
```

oder:

b) OLWM Menu:  
(rechte Maustaste)





# ddd

## Zoologie der ddd Derivaten:

**ddd**

Urform Editor Version

**ddd\_run**

Urform Laufzeit Version

**ttf\_ddd**

TTF spezifische Editor Version

**ttf\_ddd\_run**

TTF spezifische Laufzeit Version

**ttf\_ddd\_run\_new**

... das ist `ne lange Geschichte

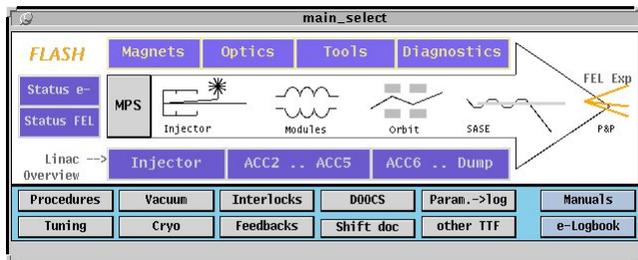
...



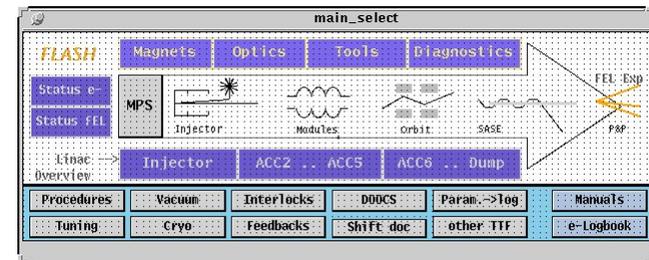
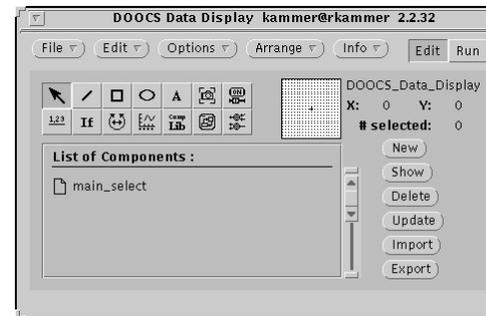
# ddd

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## Laufzeit Version



## Editor Version

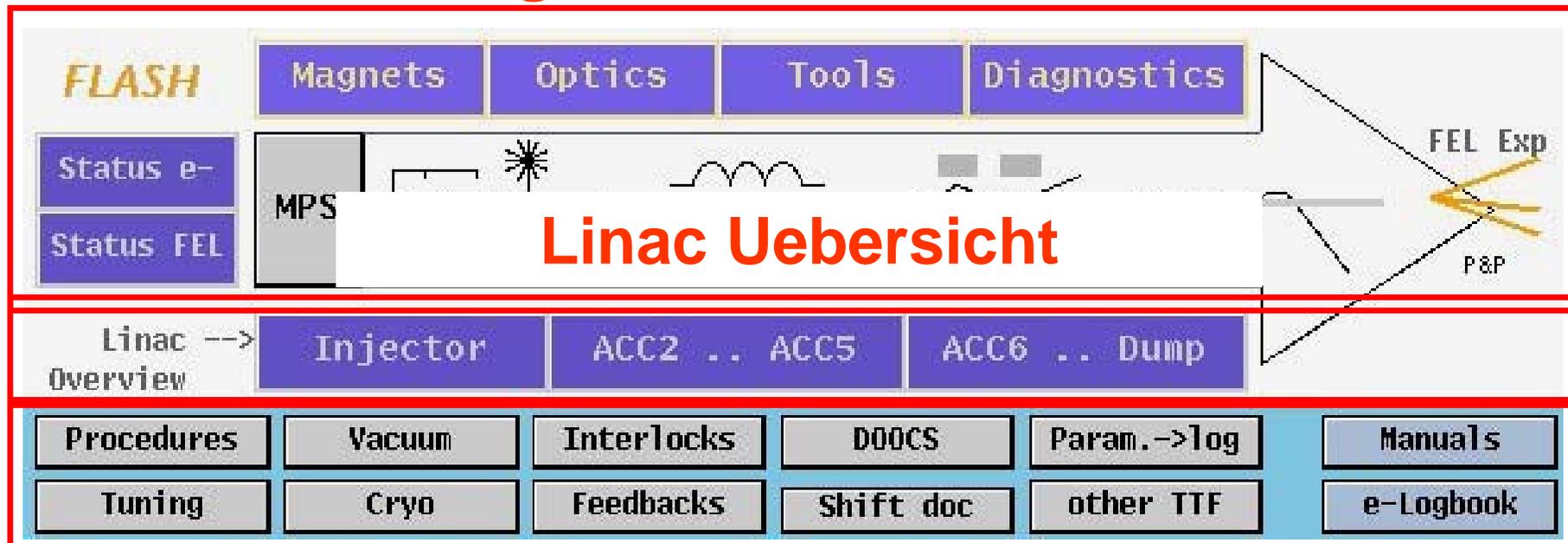




# ddd

Drei Sektionen:

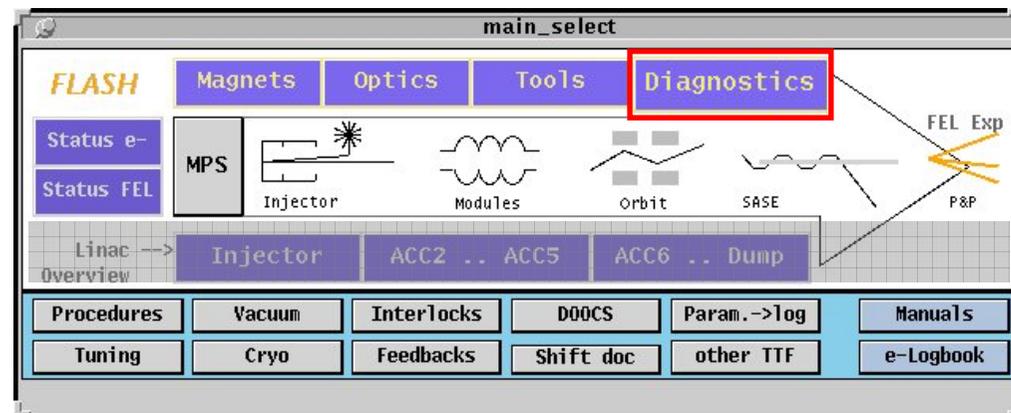
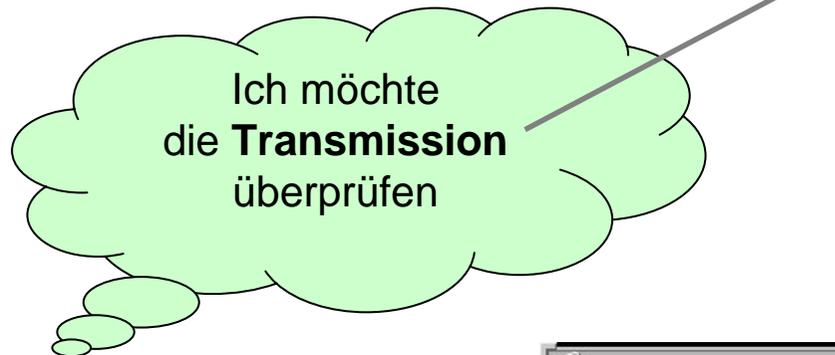
## Aufgaben und Abschnitte



## Prozeduren und Gewerke

Grundsätzlich zwei Zugänge:

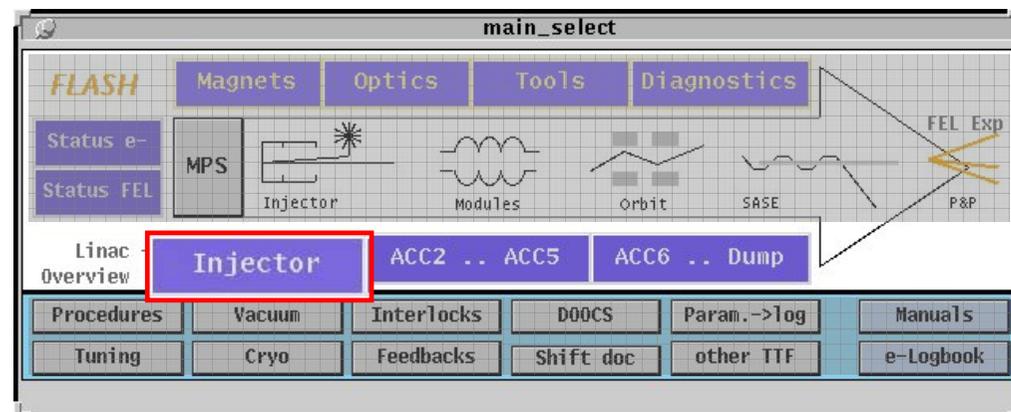
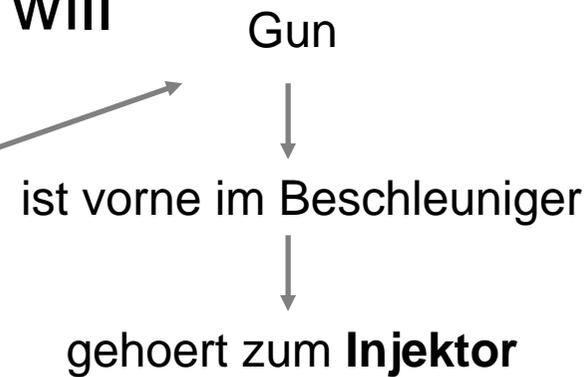
- Ich weiß *was* ich will



Grundsätzlich zwei Zugänge:

- Ich weiß **wo** ich etwas tun will

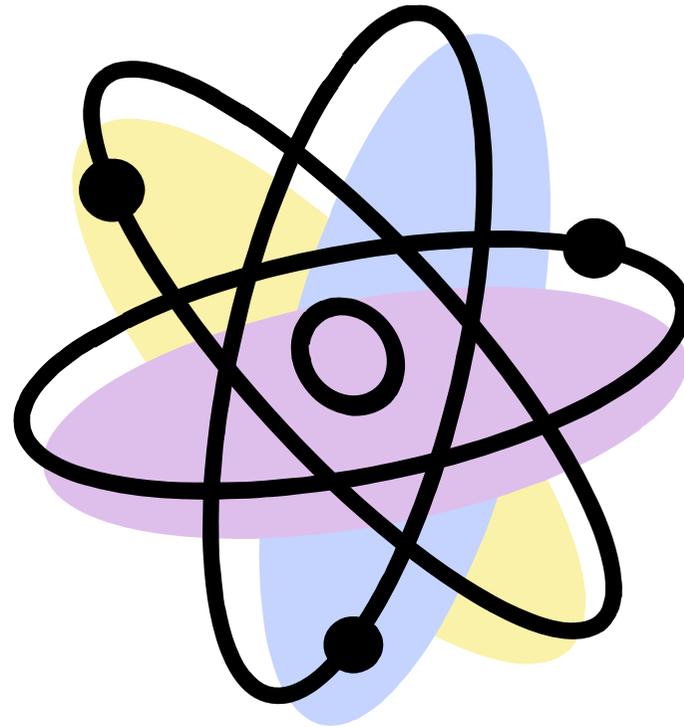
Ich möchte  
den *Gun collimator*  
hineinfahren





# Ein Beispiel (live):

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in Hamburg



Dokumentation eines Vakuum Events



# Ausblick

## *jddd* – die nächste ddd Version

The screenshot displays the jdddEditor Version 1.0 interface. The main window shows a diagram of a "Gun Section" with components like "Sol Mover", "Laser", "Klystron 3", "Klystron 2", and "ACCI". The interface includes a menu bar (File, Edit, View, Run, Help), a toolbar, and several panels:

- Component Inspector:** Shows a tree view of the document structure, including "TabbedPane1", "Tab0", and various components like "IncludeComponent", "If7", "If6", "X != 0", "else", "Icon1", "CheckBox1", "Label1", "Button6", "Button1", "Button5", "Button4", "Line5", "Button3", "Value1", "Button2", and "Group1".
- Component Palette:** Lists available components categorized into "Pane Components", "Static Components", "Dynamic Components", "Logic Components", and "Plot Components".
- Button1 - Properties:** A table showing the properties of the selected "Button1" component.

Property	Value
name	Button1
function	New Window
text	Laser
textColor	[51,51,51]
textFont	Dialog,1,12
buttonColor	[238,238,238]
buttonTra...	
button3D	<input checked="" type="checkbox"/>
icon	
adr	
xmlFile	
toolTipText	
clipX	2
clipY	2



# Ausblick

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## SUN Secure Global Desktop

The screenshot displays the Sun Secure Global Desktop environment. A Mozilla Firefox browser window is open, showing the Sun Secure Global Desktop web interface. The browser's address bar contains the URL `https://gansvr2.desy.de/sgd/index.jsp?langSelected=en`. The web page features the Sun Microsystems logo and a navigation menu with options for HELP, INFO, and LOGOUT. Below the navigation menu, there is a section for APPLICATIONS, including a list of tools such as Alarm Info Tool, Terminal (gansvr2), and various ddd and jddd applications. A Windows taskbar is visible at the bottom of the browser window, showing several open windows including DESY Homepage, Firefox (gansvr2), Fullscreen session (gansvr2), Thunderbird (gansvr2), and dterm (vmlaser1).

In the foreground, a window titled "main\_select" is open, displaying a control panel for the FLASH linac. The panel includes a status section with "Status e-" and "Status FEL" indicators. Below this, there is a diagram of the linac components, including the Injector, Modules, Orbit, SASE, and FEL Exp. The diagram shows the flow of the electron beam through these components. At the bottom of the control panel, there are several buttons for different functions: Procedures, Vacuum, Interlocks, D00CS, Param. -> log, Manuals, Tuning, Cryo, Feedbacks, Shift Doc., Other TTF, and e-Logbook. The bottom of the control panel also displays the copyright information: "© 2008 Sun Microsystems, Inc. All rights reserved." and the URL "gansvr2.desy.de".



# Ende

**FLASH**  
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**Vielen Dank für die Aufmerksamkeit!**

Fragen und Anmerkungen sind herzlich Willkommen!

- Referenzen:

- ddd: <http://adweb.desy.de/mpy/BKR/aktuell> (TTF Bedienung)
- DOOCS: <http://doocs.desy.de>
- FLASH allg.: <http://ttfinfo.desy.de/TTFelog> (siehe *doc* Sektion)
- Aber auch z.B. <http://flash.desy.de>