

S.T.A.R.S. Kickoff

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19. October 2000

Agenda

- Current visionary scenario
- Top level design and team structure
- Registration and next steps

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An (Almost) Real Procedure

Forschungsreaktor München (FRM)

B E T R I E B S H A N D B U C H (B H B)

Bearbeiter:

Unterschrift

Bearbeiter:

Stand:

Freigebe

Rev.-Index:

FRM-Betriebsleitung:

Teil: V

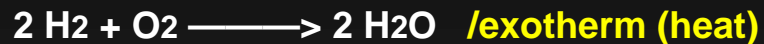
Kap.: 3

Titel: Störfälle und Störungen

Zugehörige Unterlagen: Rohrleitungsplan Kälte Quelle am FRM; Zeichnungs-Nr. KQO-201
Rohrleitungsplan für KQ-Kälteanlage; Zeichnungs-Nr. KQO-200
Grenzwerte, Alarmer, Folgeschaltungen der KQ-Anlage; Nr. KQIE@MÜS#4

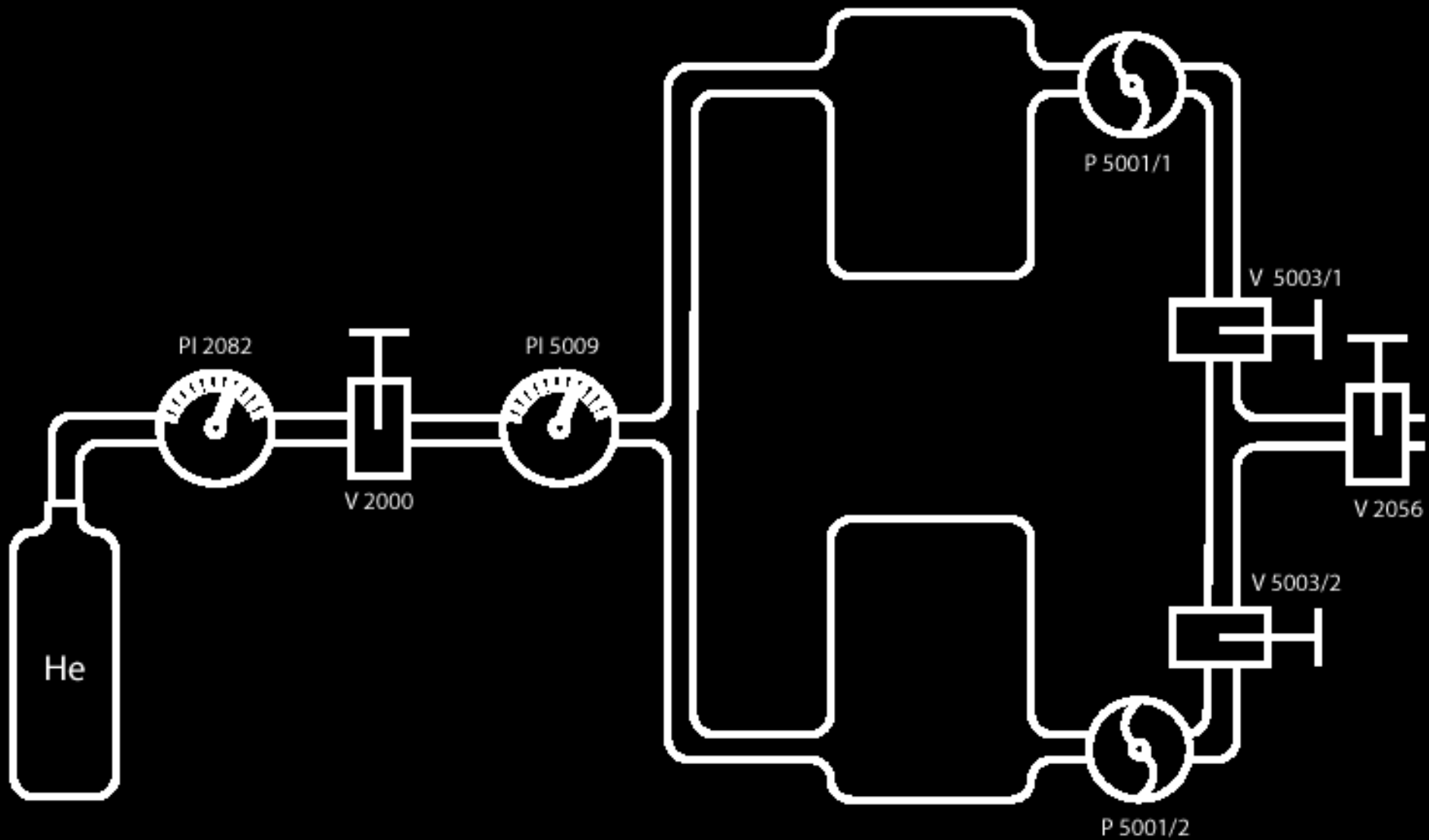
Helium Flushing System

- Hydrogen is dangerous



- Nitrogen is used to flush Hydrogen from one of the subsystems of the Reactor in a controlled manner
- A Helium Flushing System serves as a *backup* for the Nitrogen Flushing System

Helium Flushing System (HFS) A Simplified View



HFS Maintenance Procedure

Part I

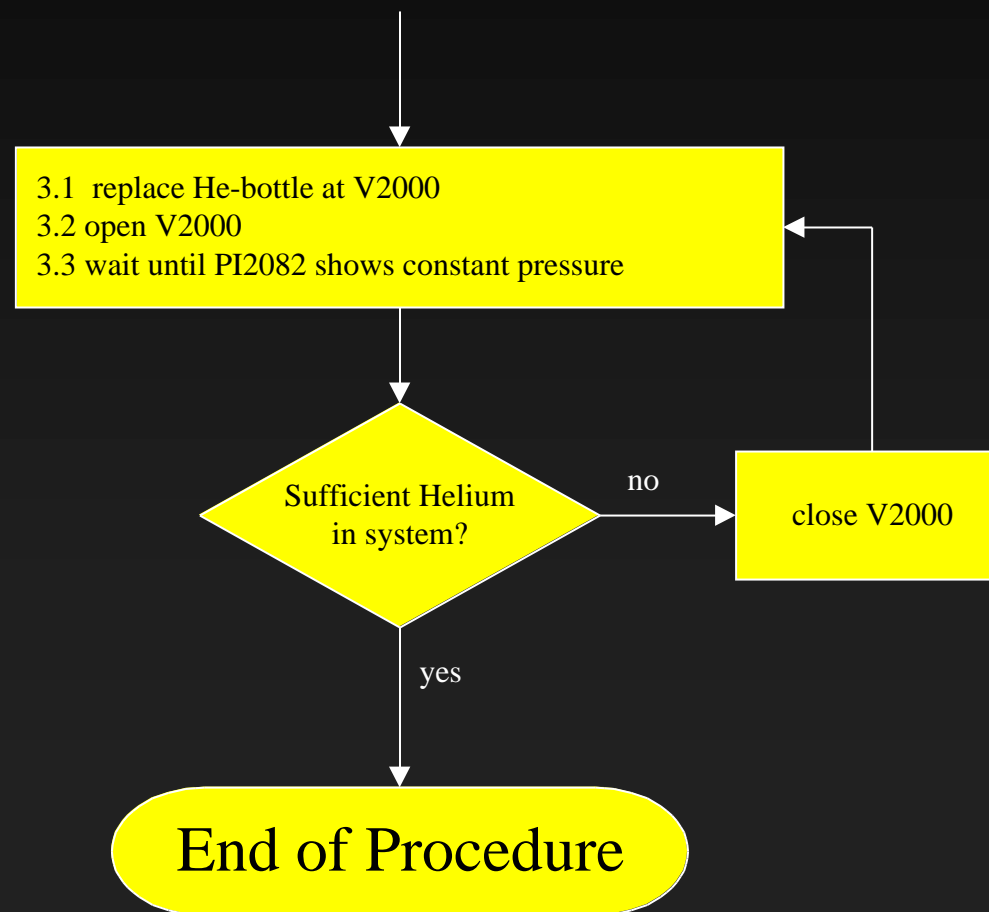
Work order received

```
graph TD; A{{Work order received}} --> B[2.1 close V2000  
2.2 turn on P5001/1  
2.3 turn on P5001/2  
2.4 open V2003/1  
2.5 open V5003/2  
2.6 open V2056  
2.7 wait until PI5009 shows 100 mbar  
2.8 close V2056]; B --> C[ ]
```

2.1 close V2000
2.2 turn on P5001/1
2.3 turn on P5001/2
2.4 open V2003/1
2.5 open V5003/2
2.6 open V2056
2.7 wait until PI5009 shows 100 mbar
2.8 close V2056

HFS Maintenance Procedure

Part II



How is it done today?



He-System bis zu den geschlossenen Ventilen evakuieren,
dazu

Ventil, H	V2000	ZU	<u>Vor F-Bau 104</u>
Vakuumpumpe	P5001/1	EIN	G-Haus _____
Vakuumpumpe	P5001/2	EIN	G-Haus _____
Ventil, H	V5003/1	AUF	G-Haus _____
Ventil, H	V5003/2	AUF	G-Haus _____
Ventil, H	V2056	AUF	G-Haus _____
Warten (evakuieren) bis			
Druckanzeige an			
Meßstelle (Evakuier-Sammelleitung)	PI5009	$1 \cdot 10^{-1}$ bar abs	G-Haus _____
dann			
Ventil, H	V2056	ZU	G-Haus _____

Our (long term) Solution:

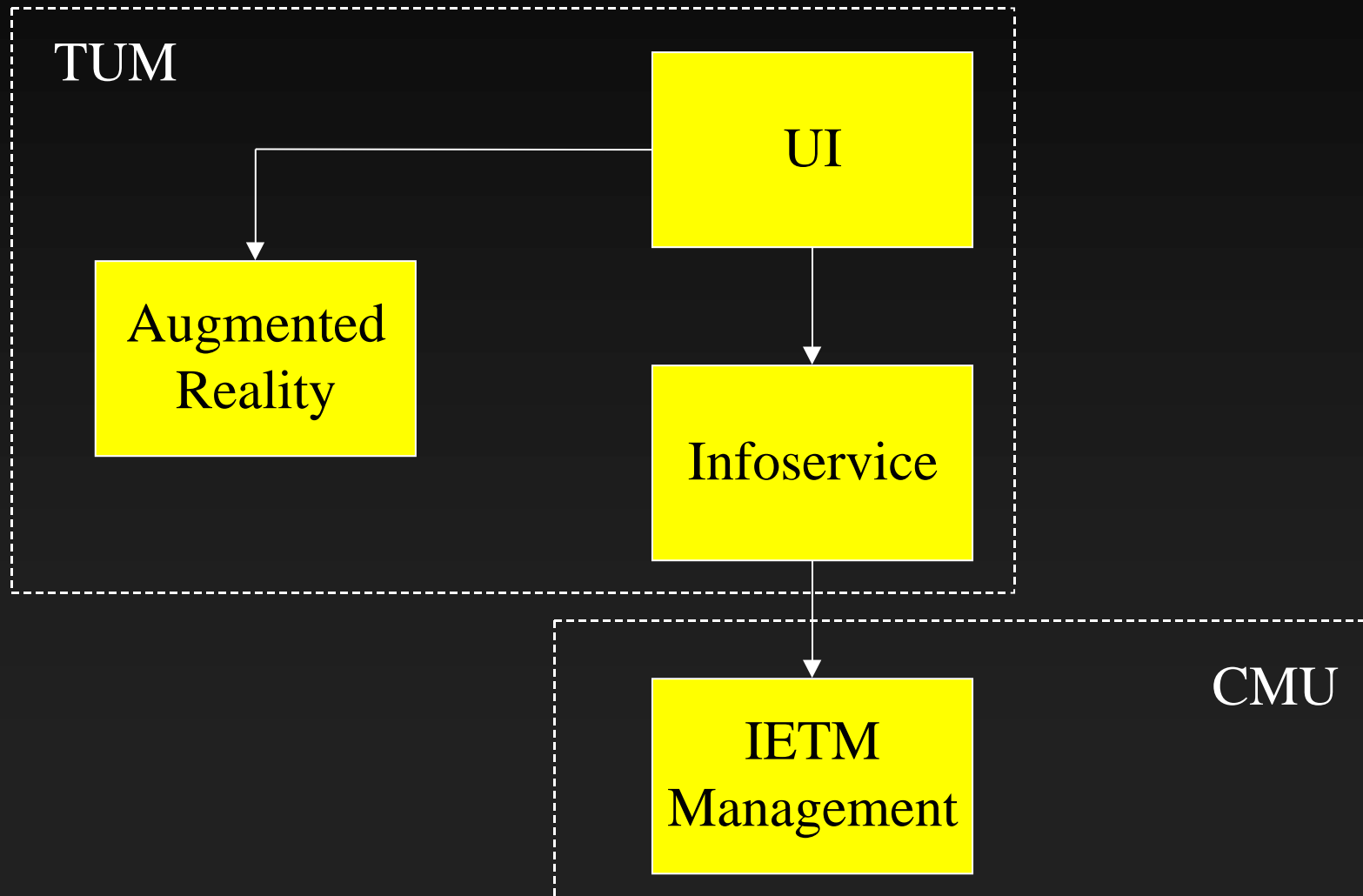
- IETMs
- Wearable Computer
- Multimodal Input
 - Keyboard/Dial
 - Speech Recognition
 - Sensory Data
- Multimedial Output
 - Conventional Graphics
 - Speech Synthesis
 - FOV Augmentation



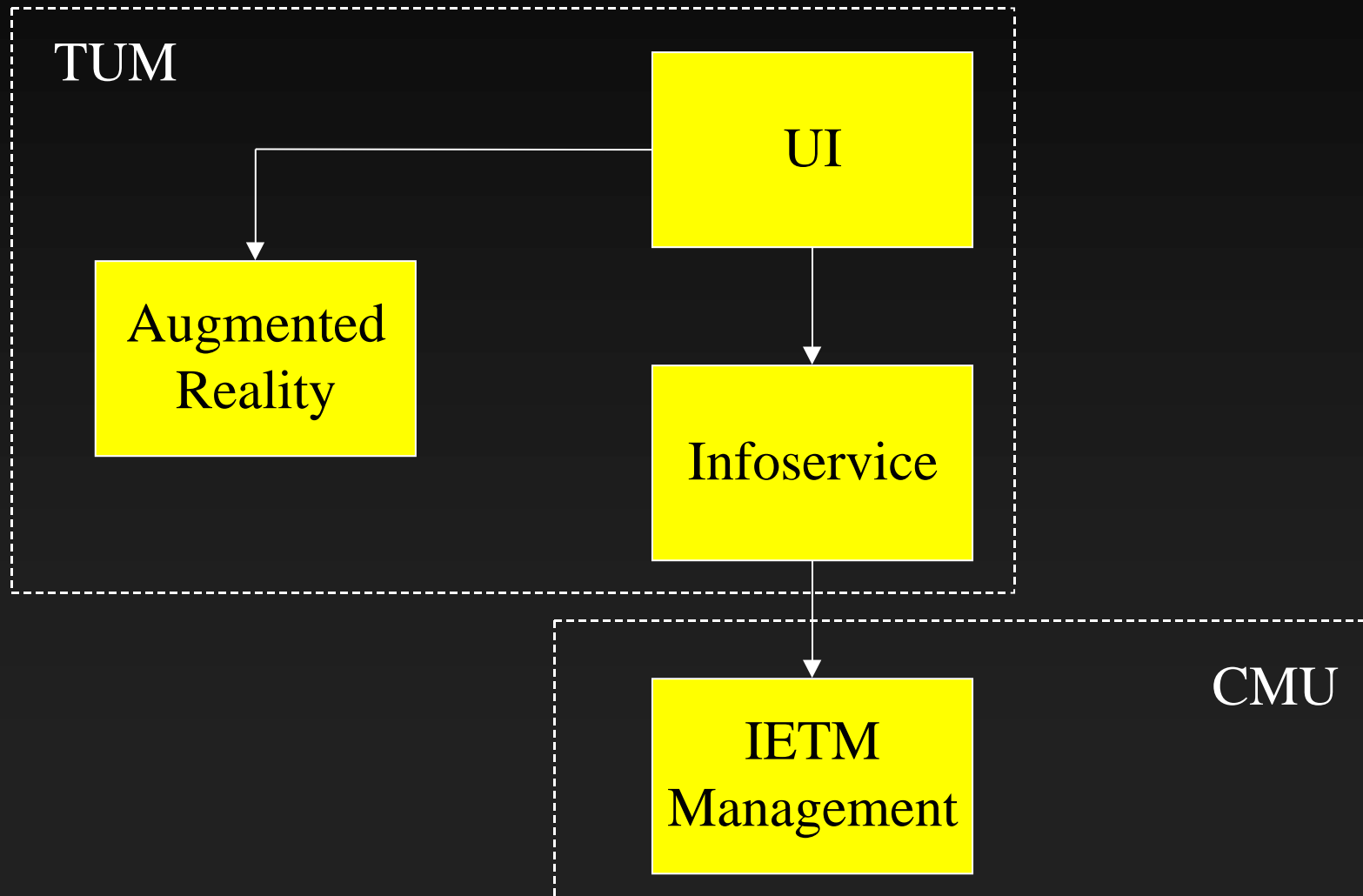
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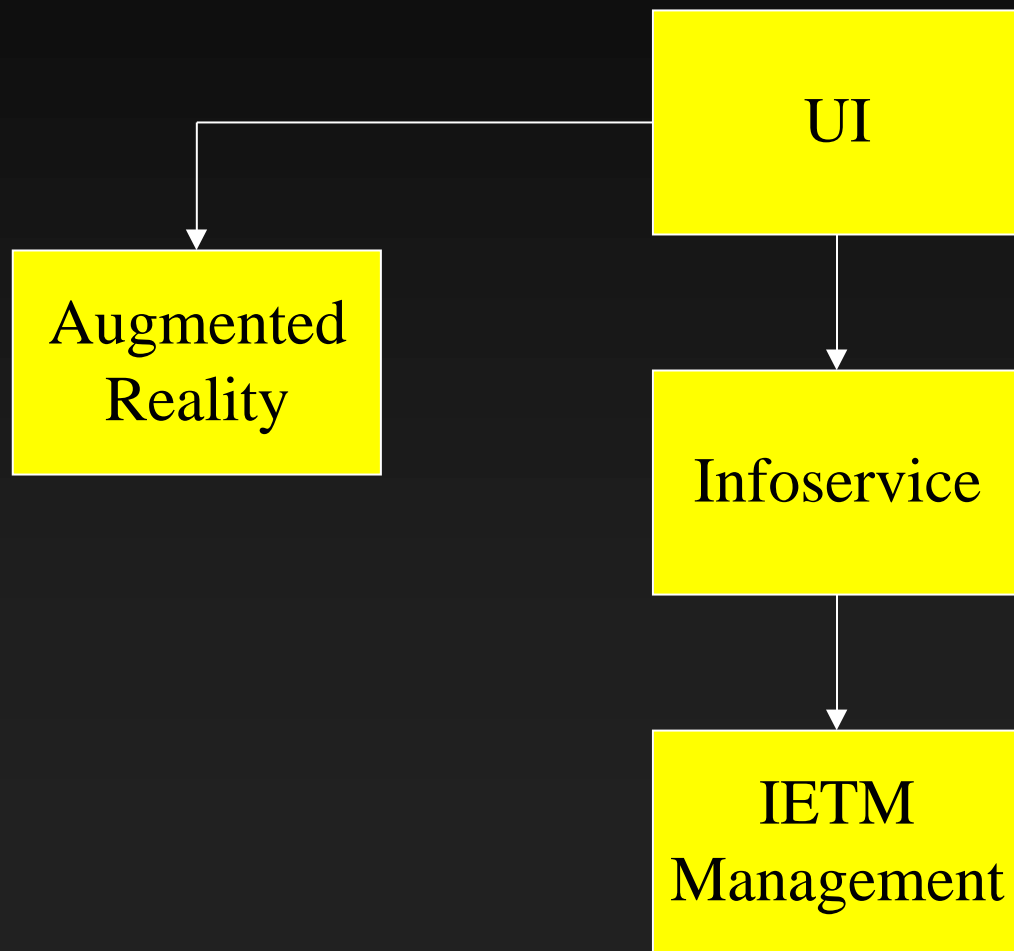
Top-Level Design



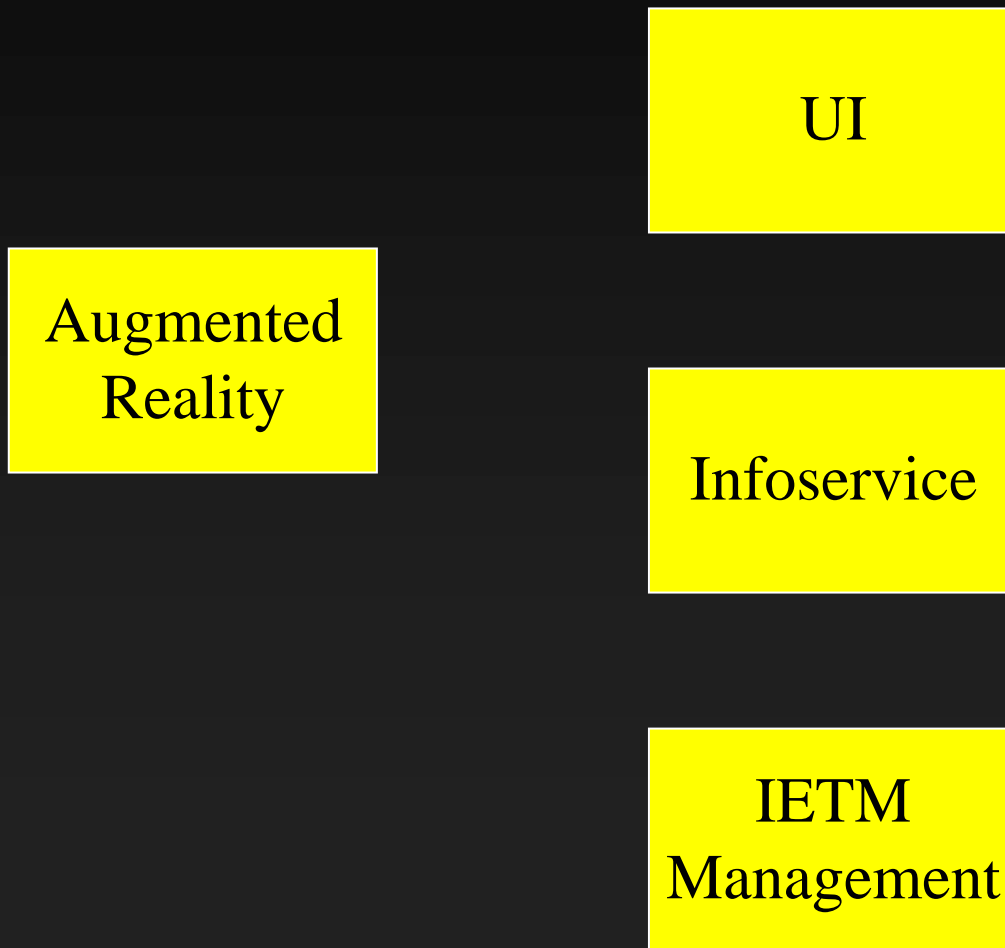
Team Structure



Team Structure



Team Structure



Team Structure

cross functional teams

Architecture

Devices

Augmented
Reality

UI

Infoservice

IETM
Management

Cross Functional Teams

- Architecture
 - More talking, less coding
 - Make System Level Decisions that Impact Everything
- Devices
 - Less talking, more coding
 - Write Video Digitizer Components for QuickTime
 - Integrate Advanced Authentication Methods
 - ...

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Registration

Register at:

[Http://www12.in.tum.de/projects/STARS2001/](http://www12.in.tum.de/projects/STARS2001/)

before Fr. October 20, 20:00.

All participants should register, even if you already have done so in July.

Next Steps

- UML Tutorial (Fr. 11:15, Rm: S1128)
- Team Assignments (Mo. 14:15, Rm -3175)

Q & A