

IHE for Surgery - erste Supplement-Vorschläge -

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Motivation – Warum IHE für die Chirurgie?

- Unsere Referenzimplementierungen im Bereich Computerassistierte Chirurgie nutzen IHE-Profile (z.B. Consistent Time) ;-)
- Zu vielen DICOM-SOP-Klassen gibt es ein IHE-Pendant
- Hilfreich für die Definition des Workflows bei Implantaten



Implantathersteller



Planungssoftwarehersteller

Integriert Schablonen in Planungssoftware

Stellt Schablonen zur Verfügung



PACS Hersteller

Integriert Planungssoftware in PACS Systeme



Gesundheitswesen

Erste Vorschläge:

Integrating the Healthcare Enterprise



IHE Surgery Technical Framework Supplement

Surface Segmentation Profile (SSE)

Draft for Public Comment

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Integrating the Healthcare Enterprise



IHE Surgery Technical Framework Supplement

Implant Template Distribution Profile (ITD)

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Integrating the Healthcare Enterprise



IHE Surgery Technical Framework Supplement

Implantation Plan Distribution Profile (IPD)

Draft for Public Comment

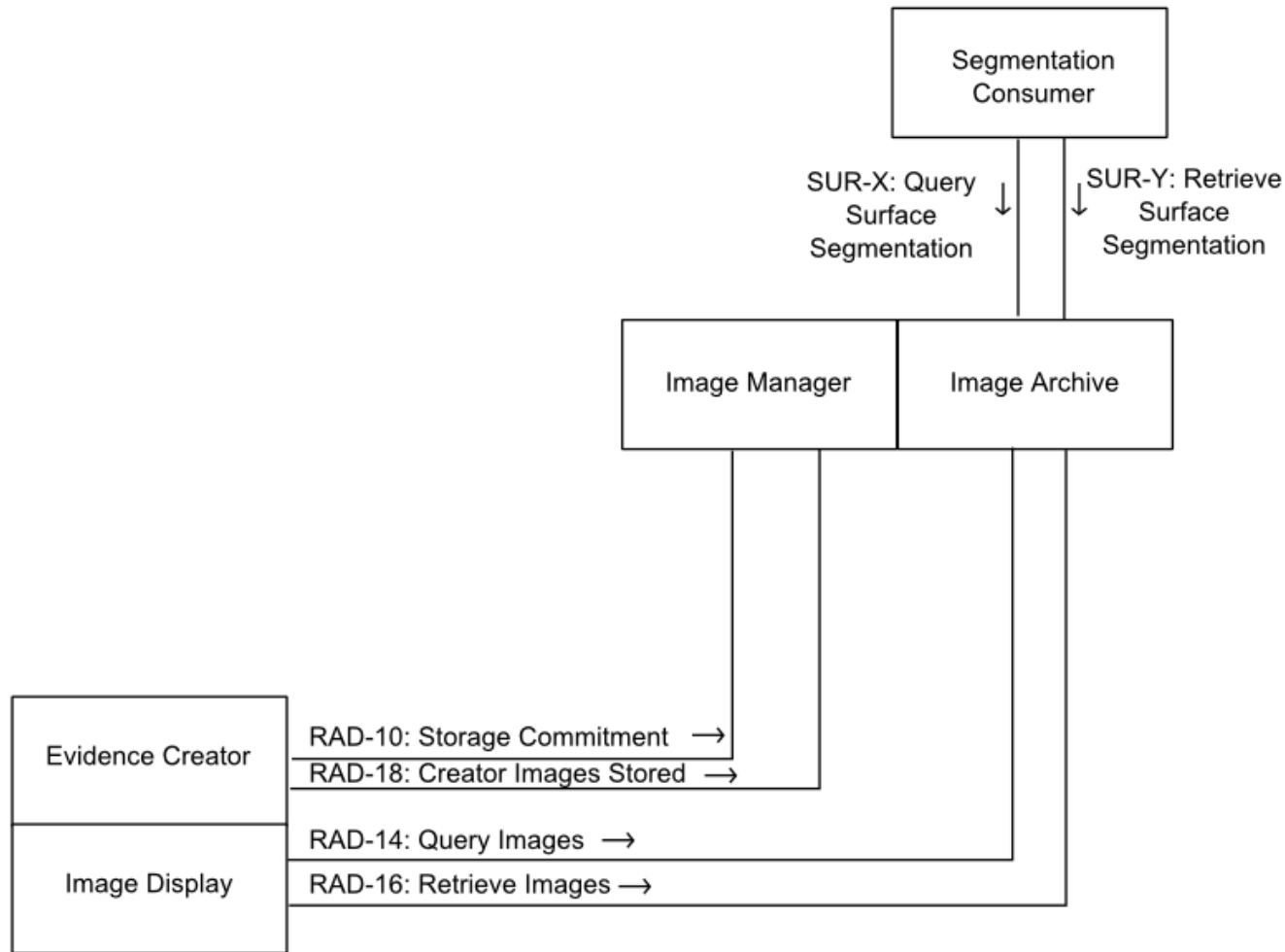
2010-03-15
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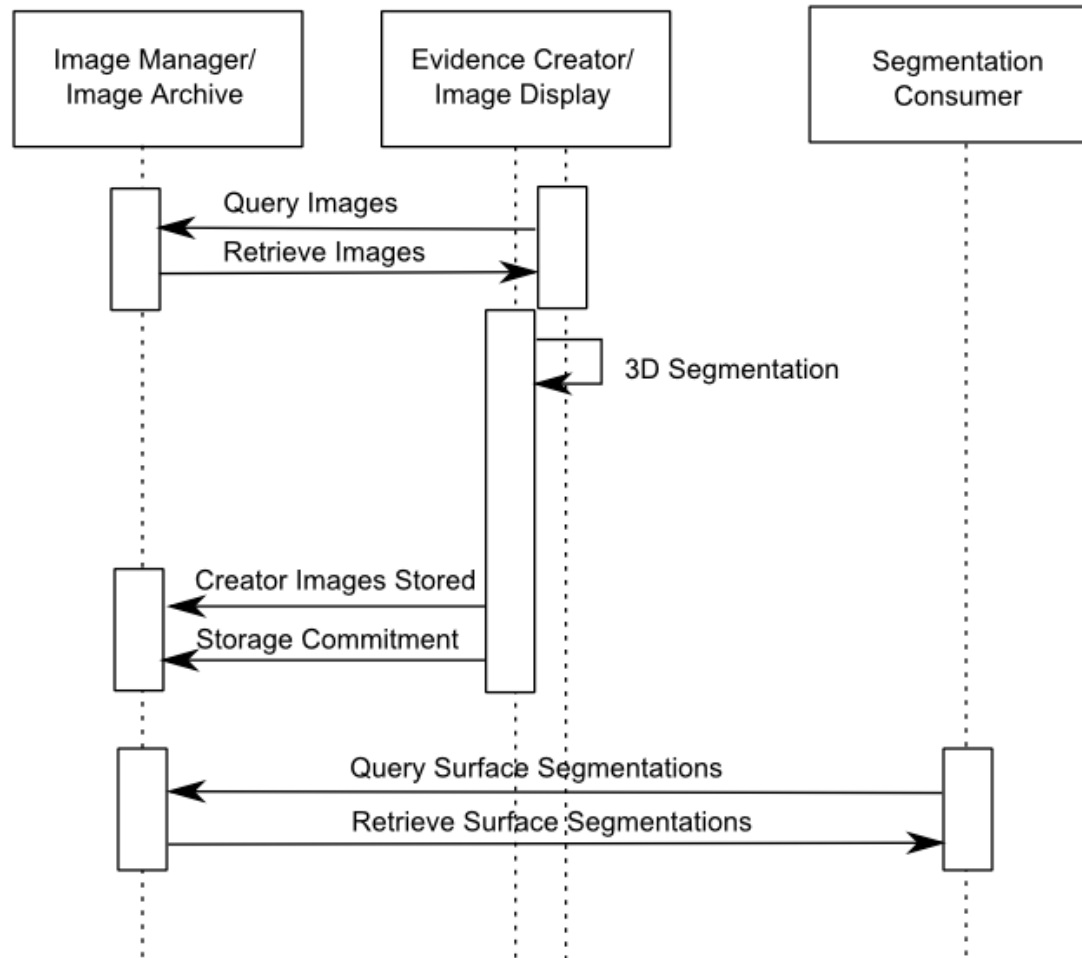
Surface Segmentation Profile (SSE)

- Derzeit noch im luftleeren Raum:
„This is a supplement to the IHE Surgery Technical Framework“
- Ziel: Genauer die Nutzung der DICOM SOP-Klassen
“Surface Segmentation” definieren.

Surface Segmentation Actor Diagram



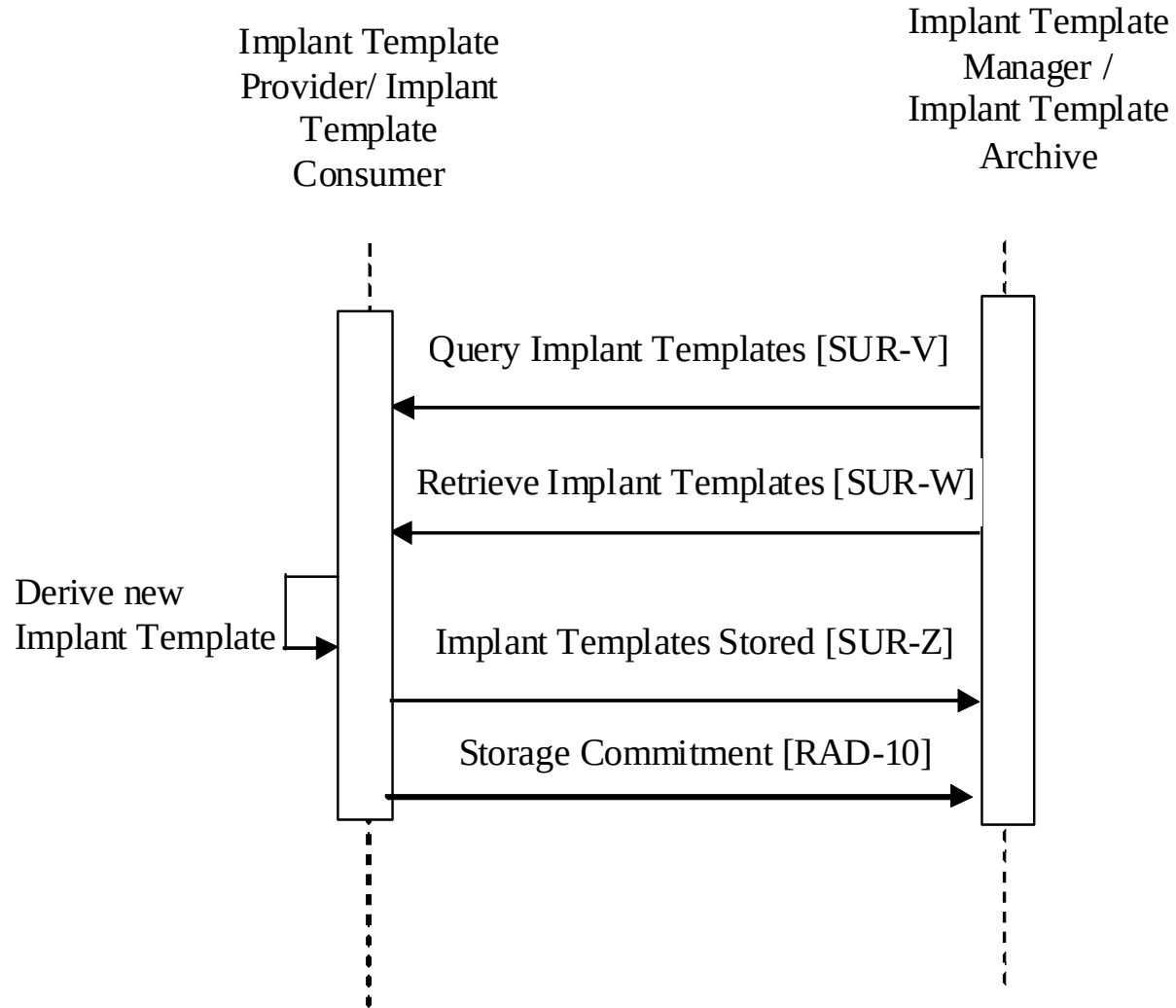
Use-Case: Tumorsegmentierung (Beispiel)



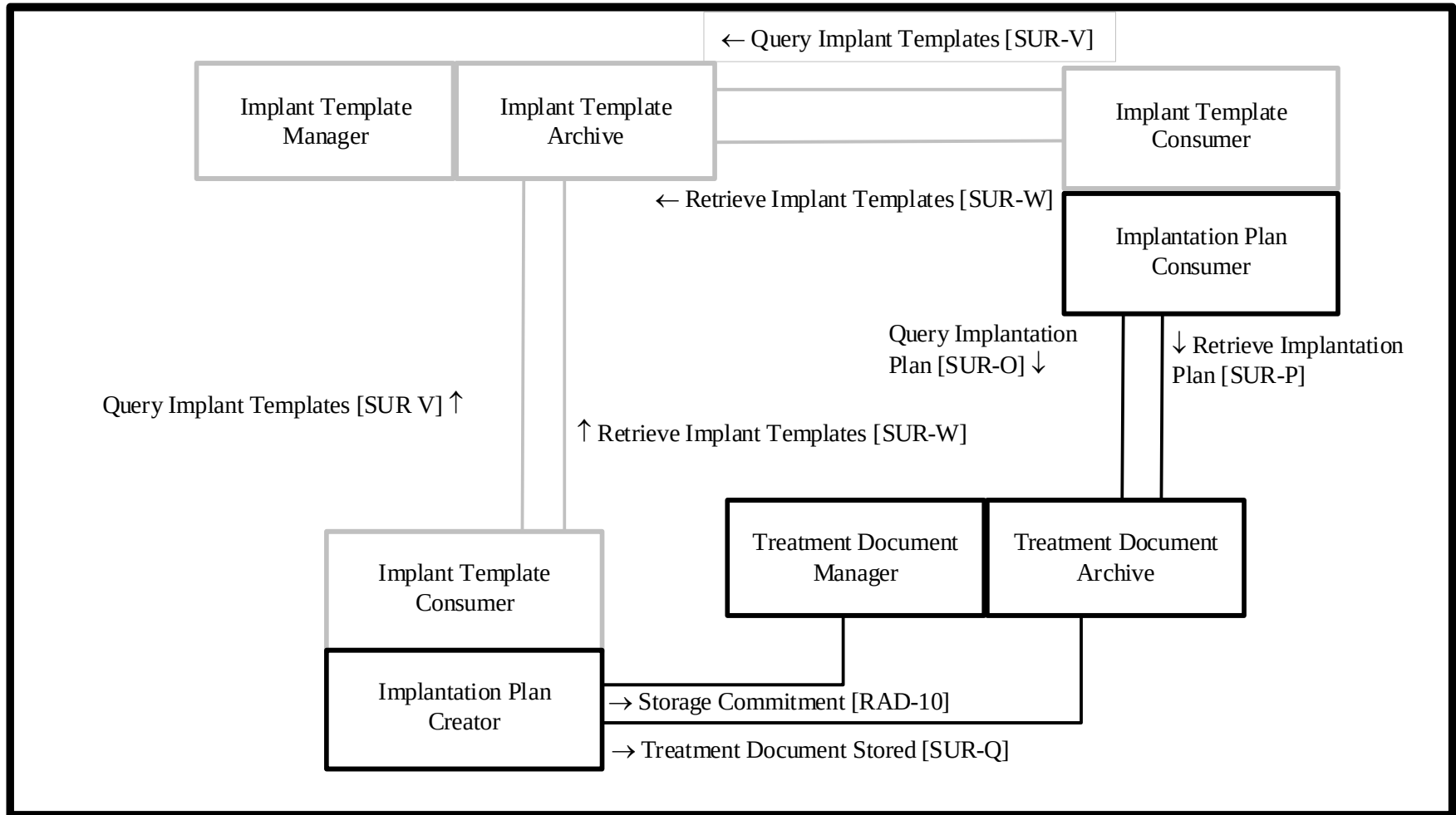
Implant Template Distribution

Actor	Options
Implant Template Provider	IHE Document Digital Signature
	Basic DICOM Media Security Profile
Implant Template Manager / Implant Template Archive	DICOM Bit-Preserving Digital Signatures Secure Use Profile
Implant Template Consumer	IHE Document Digital Signature
	Basic DICOM Media Security Profile

Basic Process Flow



Implantation Plan Distribution Profile (IPD)



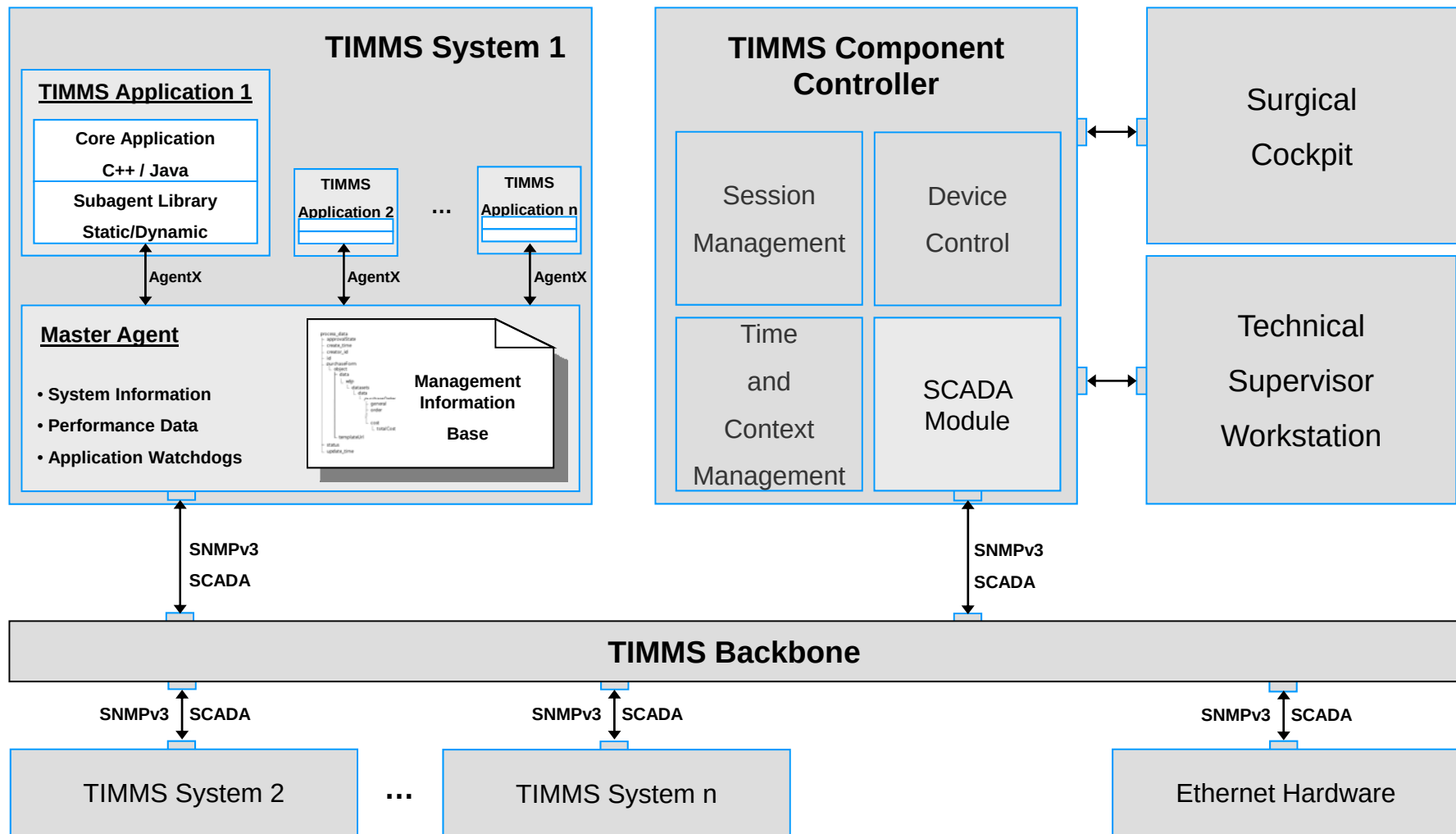
...und dann?

Wo kann die Reise hin gehen?



TIMMS Supervisory Control and Data Acquisition (SCADA) Architecture

11



TIMMS Component Controller

File Help

TIMMS Devices

ICCAS Navigation Storz Endoskop S-Video Generator Siemens Ultraschall

Master Monitor Sony Plasma Monitor

SNMP Manager

SNMP agents

Enter agent address: Add

Select agent: localhost Remove

History settings

☒ Enable history

Timer interval: 2000 ms

Scope: 10 values

Apply

OID: 1.3.6.1.4.1.32129.1.1.3.0

Management information base

- identified-organization (3)
 - dod (6)
 - internet (1)
 - management (2)
 - private (4)
 - enterprise (1)
 - agent-pp (4976)
 - iccas (32129)
 - system (1)
 - performance (1)
 - memory-status (1)
 - storage-status (2)
 - cpu-usage (3)

Value type: sNMP_SYNTAX_UINT32

Value history

| Time | Value |
|----------|-------|
| 16:36:44 | 8 |
| 16:36:42 | 9 |
| 16:36:40 | 9 |
| 16:36:38 | 9 |
| 16:36:36 | 6 |
| 16:36:35 | 17 |
| 16:36:32 | 46 |
| 16:36:30 | 78 |
| 16:36:28 | 98 |
| 16:36:26 | 24 |

Expand all Collapse all Show graph

History graph

100

0

-100

Time Server [IHE Consistent Time / Grouped Server]

TIMMS Central Time

9. January 2009

16:36:08

Remote Time Server

☒ Enable synchronization with remote time server:

NTP Time-Server Address: 139.18.164.103

Stratum/Time Zone: 11 / UTC

Last Synchronization/Status: 16:34:27.704 [Successful]

Synchronization Interval [sec]: 600 Synchronize!

TCC NTP Time Server

Local Address: 139.18.164.210 : 104

Server Status: Running.

Stratum/Time Zone: 12 / UTC

TIMMS NTP Client Components:

| Client IP | Last Synchronization |
|-----------|----------------------|
|-----------|----------------------|

Time-System Messages:

16:34:25 Client: Anfrage gesendet

16:34:25 Client: Antwort empfangen

16:34:27 Client: Anfrage gesendet

16:34:27 Client: Antwort empfangen

- Erste Vorschläge für IHE-Profile „for Surgery“
- Identifikation der dringendsten Probleme
- Viele Hersteller im Bereich CAS sind am Anfang bzgl. Standardisierung
 - IHE kann einen geeigneten Rahmen für herstellerübergreifende Diskussion bieten

International Workshop on Systems and Architectures for Computer Assisted Interventions 2010

China National Convention Center (CNCC), Beijing/China, September 2010

[Download Call for Paper \(PDF\) here.](#)



The goal of this workshop is to establish a forum for discussing open interfaces, interoperability, and standards for the development of computer assisted intervention systems. This topic was chosen based on overwhelming interest expressed at the "Systems and Architectures" workshop at MICCAI 2008 and 2009. The 2008 workshop focused on toolkits; in 2009 it emphasized the importance of open interfaces and standards. In 2010, we will focus on "Modularization and Standardization of CAS Systems and Frameworks". As before, this workshop will include strong participation from industry and academia.

http://www.iccas.de/iccas/iccas_events/cai_workshop_201000.html

Vielen Dank

Acknowledgement

Sponsored by funds of the European Regional Development Fund (ERDF) and the state of Saxony within the frame of measures to support the technology sector.

