



Project Gemini

Daniel Vreeman, Chief Standards Development
Officer, HL7 International

Christopher Carr, Director of Informatics,
RSNA/Secretary IHE International Board

Project Gemini Mission

The goal of Project Gemini is to identify and pursue projects that focus the people, resources and processes of both organizations to advance open standards-based interoperability to address high-value use cases, including accelerating the implementation of HL7 FHIR. Gemini project activities include coordinated development, testing and demonstration of standards specifications: FHIR Resources and Implementation Guides and IHE Profiles.

A Longstanding Collaboration

GEMINI

Twins, bridging, moonshot

Focus on advancing FHIR as the global platform standard for interoperability

- 🌐 https://blog.hl7.org/another_type_of_moonshotproject_gemini
- 🌐 <https://www.ihe.net/news/ihe-continues-to-pave-the-way-for-fhir-through-project-gemini/>



The Standard

The Official Blog of Health Level Seven® International


Another Type of Moonshot: Project Gemini


📅 Sep 25, 2018 1:53:32 PM / by Wayne Kubick


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Achieving healthcare [interoperability](#) at any level, by definition, requires at least two parties working together. Achieving it on a global scale requires a shared dedication of the many to the common good. Consider the vision statements of two organizations:












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Project Gemini

Created by Joshua Procius, last modified by Daniel Vreeman on Mar 20, 2023

A joint initiative of HL7 and IHE to advance the use of FHIR for interoperability

Gemini Steering Committee Members

- Jürgen Brandstätter, IHE (@Jurgen Brandstaetter)
- Christopher Carr, IHE (@Christopher Carr)
- Dan Vreeman, HL7 (@Daniel Vreeman)
- Diego Kaminker, HL7 (@Diego Kaminker)

What is Project Gemini?

Project Gemini is a joint initiative of HL7 and IHE to advance interoperability. The goal is to identify and pursue pilot projects that focus the people, resources and processes of both organizations to accelerate the implementation of FHIR to address high value use cases. Pilot project activities may include coordinated development, testing and demonstration of standards specifications, including FHIR Resources and Implementation Guides and IHE Profiles.

The Gemini Steering Committee meets monthly to identify, prioritize, and pursue areas of collaboration where together we can accelerate the implementation of FHIR to address critical interoperability needs.

Contact us at gemini@fhir.org


Provide feedback

How Project Gemini Works

- Any member of HL7 or IHE can [submit a Gemini Project Proposal](#) to the Gemini Steering Committee for consideration
- The Gemini Steering Committee will review the proposal and consider its alignment with shared strategic directions, resources required and available, and potential value to the industry
- Approval by the Gemini Steering Committee requires a majority and at least one member approving from each organization.
- Approved Gemini Projects will be granted a shared space on confluence.hl7.org for documenting their project and process
- It is expected that most project workstreams (e.g. development of a white paper) will have a primary home in one or the other SDO's governance structure (e.g. an HL7 Work Group or IHE Domain Committee) and will follow the processes established by those structures
 - Members of both SDOs are welcome and encouraged to participate in the project work.
- Gemini Projects will be expected to provide regular progress updates (e.g. quarterly) to the Steering Committee
- The Gemini Steering Committee members will work within their organization to ensure that Gemini Project team work has appropriate support (e.g. via tooling updates if needed) to be successful and communication (e.g. via marketing) to achieve recognition in the industry.
- The Gemini Steering Committee will work to ensure an adequate plan for maintenance and sustainability is incorporated into Gemini Projects.

HL7 vs. IHE

HL7

- Premier Health IT SDO
- v2, CDA,  **HL7 FHIR**
- 32 WGs, WGMs, Accelerators, Affiliates
- FHIR Connectathons

IHE

- Health IT Stds Implementation
- Profiles: XD*, mHD, Workflow
- Domain / Deployment Cmtes
- IHE Connectathons / Projectathons

*Common mission, complementary/
overlapping activities*

How to Coordinate?

- Identify common priorities and activities
- Connect leaders in relevant WGs/Committees
- Create work plan utilizing people, resources and processes of both organizations
- Engage broad group of stakeholders
- Communicate and promote results of collaboration

*Outcome: Interoperability specifications,
rigorously tested and implemented*

Gemini Projects v. 1

- In flight: [Device Interoperability using SDPi+FHIR](#)
- In planning:
 - [HL7 FHIR Multi-domain HIE Architecture](#)
 - [Computable Care Guidelines](#)



IHE-HL7 Gemini SES+MDI – *SDPi 1.0 –* *HIMSS'23 Gemini Success Story!*

19 April 2023 ~ Chicago



FHIR is a trademark of Health Level 7, International.

40 Year Journey for Medical Device-to-Device Interoperability ...

Technical problems solved ... repeatedly ...

IEEE / ISO / CEN Standards Published ... repeatedly ...

Business problems never solved ...

Until now!!!

**Thanks to a multi-year joint HL7-IHE
Gemini Device Interoperability program ...**



Medical Device Interoperability

Plug-and-Trust

**Specification Published for
Trial Implementation**

April 2023!

Contents

Foreword

Introduction to this Supplement

IHE Technical Frameworks General Introduction

Volume 1 — Profiles

Volume 2 — Transactions

Volume 3 — Content Modules

profiles.ihe.net/DEV/SDPi

Service-oriented Device Point-of-care Interoperability (SDPi) Technical Framework



IHE Devices Technical Framework Supplement Service-oriented Device Point-of-care Interoperability (SDPi)

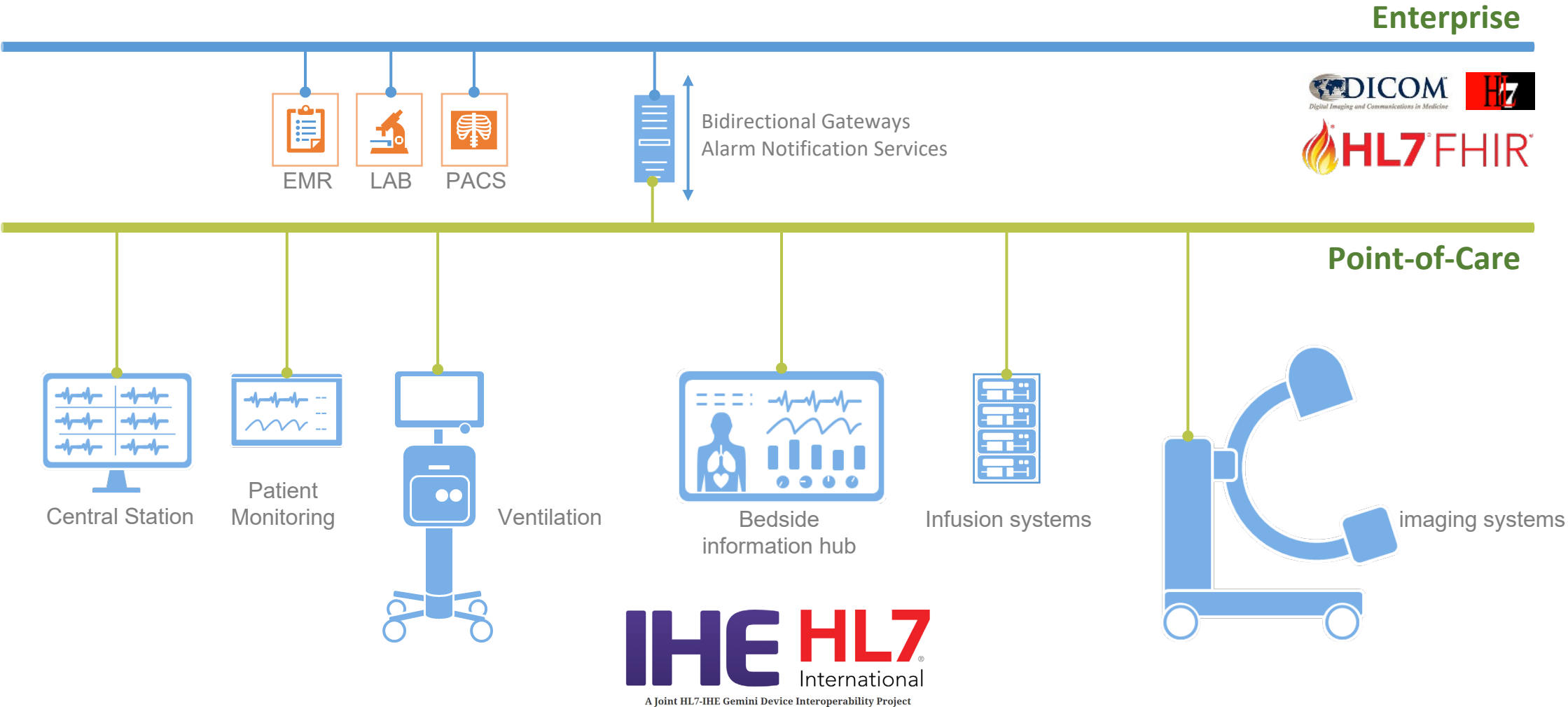
Revision 1.0.1 — Trial Implementation

Date: 2023-04-14 14:47:11 UTC

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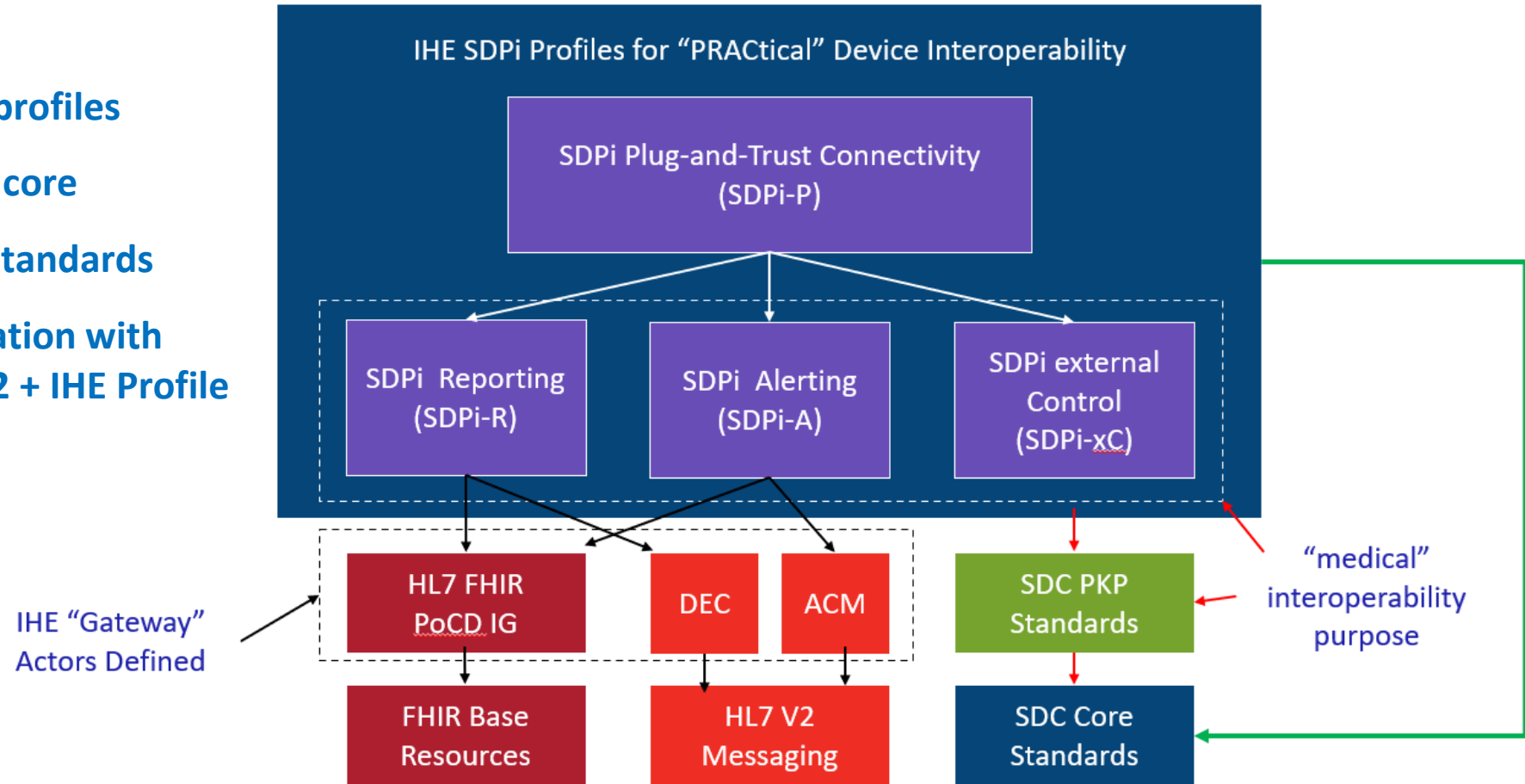
General Volume 1 Volume 2 Volume 3 Top

D2D Plug-n-Trust Interoperability + Enterprise



Service-oriented Device Point-of-care Interoperability (SDPi) Profiles

- ✓ (4) Device Interoperability profiles
- ✓ Security baked in at SDPi-P core
- ✓ Risk management via PKP standards
- ✓ Seamless enterprise integration with foundational HL7 FHIR & V2 + IHE Profile specifications
- ✓ Metadata under-the-hood supporting “requirements interoperability” & “regulatory submission ready” test reports



Why HL7-IHE Gemini?

- ✓ “Device Guys” have a 20+ history of meeting jointly with IEEE / HL7 & IHE
- ✓ Existing “enterprise” solutions integrate IEEE & HL7 V2 into IHE DEV Profiles
- ✓ Gemini allowed the device community to advance ...
 - ❑ One centralized collaboration place & tool set
 - ❑ One simple harmonized device interoperability story
 - ❑ One coordinated & cohesive set of specifications
 - ❑ One set of implementation & test tools and events



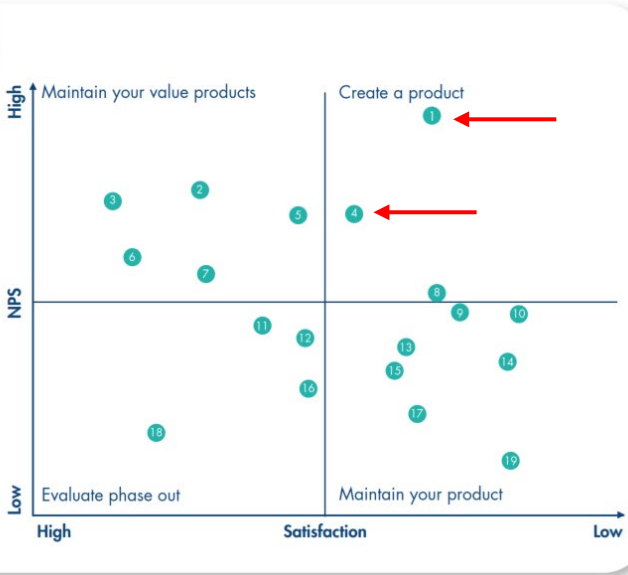
A Joint HL7-IHE Gemini Device Interoperability Project

2022 Study on MDI Value in Hospitals

USE CASES	Overall NPS	RANK	HDO RANK	MDM RANK	ICU RANK	OR RANK
Isolation Room	65%	1	2	1	1	-
Digital Charting	47%	2	1	4	2	1
Ward Round Pol	44%	3	5	3	5	-
Quiet ICU-Ward	41%	4	3	5	3	-
Integrated UI	41%	5	8	2	4	3
Surgical Display	31%	6	6	7	-	2
Spot-check Monitoring	27%	7	4	10	-	-
Automated OR Setup	22%	8	10	8	-	4
Service – Predictive Maintenance	18%	9	17	6	6	5

Physiological Closed Loop Control	17%	10
Central Patient Watch	15%	11
Intra-Hospital Transport Monitor	12%	12
Service – Biomed Notification	9%	13
Treatment Recommendation	6%	14
Augmented Surgical Display	3%	15
Personal Health Integration	0%	16
Safety Interlock	-6%	17
Dual Bedside Display & Control	-11%	18
Benchmark Therapy	-18%	19

USE CASES
1 Isolation Room
2 Digital Charting
3 Ward Round Pol
4 Quiet ICU-Ward
5 Integrated UI
6 Surgical Display
7 Spot-check Monitoring
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9 Service – Predictive Maintenance
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14 Treatment Recommendation
15 Augmented Surgical Display
16 Personal Health Integration
17 Safety Interlock
18 Dual Bedside Display & Control
19 Benchmark Therapy



See the “Silent ICU” demonstration in the HIMSS’23 Interoperability Showcase!

THE REAL VALUE OF MEDICAL DEVICE INTEROPERABILITY IN HOSPITALS

Medical Device Interoperability (MDI) is one of the most relevant technology trends in the development of medical devices. As the result of a study conducted with more than 230 participants from the main areas of patient care in hospitals, we summarize which MDI use cases are valued most by both medical technology manufacturers and especially the previously neglected perspective of healthcare professionals. We also provide valuable recommendations for the future direction of MDI development.

Dr. Stefan Schlichting
+49 162 2465894
stefan.schlichting@unity.de

Questions?