



CompuGroup  
Medical

# MATRIX AS A BRIDGE

*Enabling Cross-Border Healthcare Communication Through Open Standards*

# Patrice Zoe Brend'amour



Vienna-based, globally experienced

International Healthcare Product Leader

Led teams across US US | South Africa ZA | Europe EU

VP of Software Development

Focus: Cross-border healthcare communication



# CompuGroup Medical (CGM) Europe's Leading Healthcare IT Company



“Nobody should suffer or die just because at some point medical information was missing.”



# Healthcare Communication Evolution Timeline



## From Stone Age to Digital Age

# The Reality: Fragmented Healthcare Silos



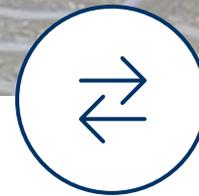
Software vendor silos



National boundaries



Regulatory barriers



Very limited  
interoperability  
between systems



Patients cross  
borders, systems  
don't



# CGM TI-Messenger & CGM Messenger

The screenshot shows the CGM TI-Messenger interface. At the top, there is a navigation bar with a hamburger menu, a medical cross icon, and the user's name "Patrice Brendamour". Below this is a "Dashboard" and "Messenger" breadcrumb. A search bar is present with the text "Search in the list". A list of chats shows "Chat" at "10:51 AM" with a preview "You: Test from m.doc". The main chat area is titled "Chat" and shows a "Today" separator. A system message states: "Patrice Brendamour made future chat history visible to all chat members, from the point they are invited". Another system message says: "Patrice Brendamour invited João Nuno". A message from "Test from m.doc" at "10:51 AM" is visible. The right sidebar shows "Group info" with a group icon, "Chat" options, and "Participants (2)": Patrice Brendamour (Creator) and João Nuno (Pending). A "LEAVE" button is at the bottom. The bottom of the screen has a text input field with "Your message" and a "SEND" button. Footer text includes "powered by m.Doc" and "Impressum | Datenschutz | Nutzungsbedingungen | FAQ | Barrierefreiheitserklärung | Version: 7.50.0".

The screenshot shows the CGM Messenger interface. The top bar is blue with the text "CGM MESSENGER". A search bar says "Search in the list". A list of chats shows "Jens Thieme" with a preview "Test pdf", "Support Crew Max ;-)" with a preview "Julia Weiß joined the chat", and "Wolfgang Miller" with a preview "Patrice Brendamour joined the chat". The main chat area is titled "Jens Thieme" and shows a "6/4/25" separator. System messages include: "Jens Thieme joined the chat", "Jens Thieme made future chat history visible to all chat members, from the point they joined.", "Patrice Brendamour joined the chat", and "9/29/25". A message from "Jens Thieme" at "3:51 PM" says "Test". A message from "Jens Thieme" at "3:53 PM" contains a PDF attachment titled "AI Agents Know Where to Look\_ A Cross Knowledge Base Search Architecture \_ by Jason Aricheta \_ Apr, 2023 \_ Better Programming (2).pdf". The bottom of the screen has a text input field with "Write your message" and a "SEND" button.



# CGM TI-Messenger & CGM Messenger: Real World use-cases



Coordinating hospital visits  
between provider and  
patient



Pharmacy consultations



Shift handovers



Ambulatory care  
coordination

# Matrix: The Foundation We Needed?

[matrix]

Myth

## Why Matrix Looked Perfect

- ✓ Open standard - no vendor lock-in
- ✓ Decentralized - no single point of failure
- ✓ Interoperable - different systems can connect
- ✓ Political approval - open source = regulatory comfort

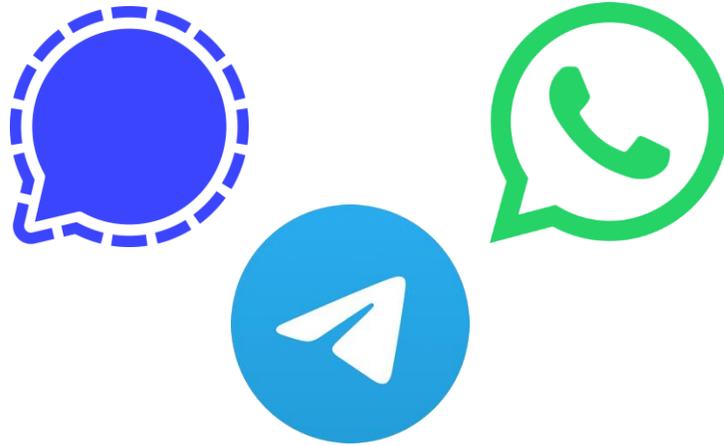
## Reality Check

- ⚠ Originally designed for consumer use
- ⚠ Healthcare needs enterprise features
- ⚠ Protocol ≠ Application

Reality



# Why Not WhatsApp/Telegram/Signal?



[ **matrix** ]

## Consumer Platforms

- ✗ Centralized control
- ✗ No healthcare-specific compliance
- ✗ No Primary Systems integration
- ✗ Limited control over encryption
- ✗ Closed source

## Matrix Advantages

- ✓ European digital sovereignty
- ✓ Healthcare-specific extensions possible
- ✓ Primary system integration possible
- ✓ Fully End-to-end encrypted
- ✓ Open source transparency

# Healthcare IT: A Diverse Technology Landscape



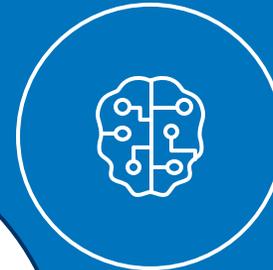
**” Matrix must work  
across ALL these  
platforms  
simultaneously**

# How We Made Matrix Work for Healthcare

Progressive Web App



Headless client - invisible background operation



Web Components  
deep Primary System integration  
(not just API!)



**Software Generational approach**



# Real-World Workflows in Integrated Scenarios



Automatic document delivery



Message notifications appear in existing Primary System



Receive patient attachments directly in patient record



Structured document exchange between primary systems (FHIR)



Case-related conversations

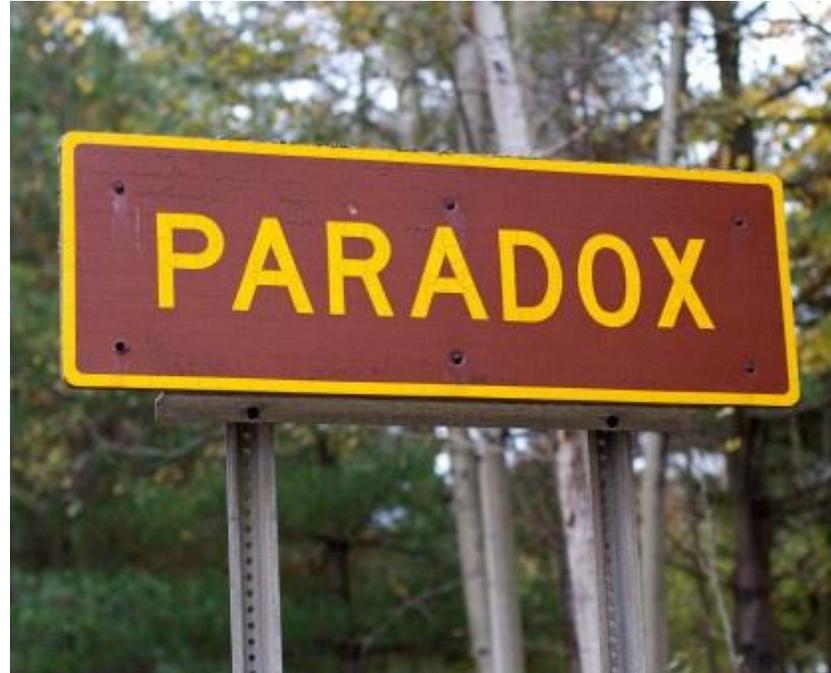
# The Healthcare Usability Paradox

## User Diversity

👤 Diverse computer literacy levels

🎯 Focus: Patient care, NOT computers

🕒 Every minute counts



## The E2E Encryption Challenge

❌ Stakeholders don't understand it

❌ Vendors struggle to implement it

❌ Users find it confusing

✅ Regulatory compliance requires it

✅ **Yet: it makes sense to have it!**

# Beyond Individual Accounts

## Complex Clinical Workflows

-  Cross-department and -organization
-  24/7 operations
-  Automated systems
-  Shared workstations

## Multi-Device, Multi-User

-  Doctor starts message on phone
-  Completes on hospital desktop
-  Nurse adds information from tablet
-  System automatically logs complete conversation to the patient record



# The Reality of Healthcare (Messaging) Regulation



Germany:

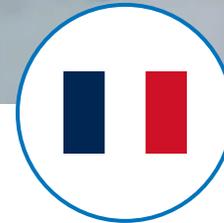
Telematik Infrastructure requirements

TIM



Austria:

ELGA system  
(copied TIM with adaptations)



France:

Mon Espace Santé /  
MSSanté



EU & other European countries:

Many different approaches

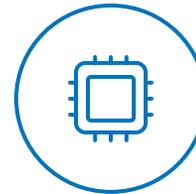
# Business Model Challenges



"Free" competition



High certification costs

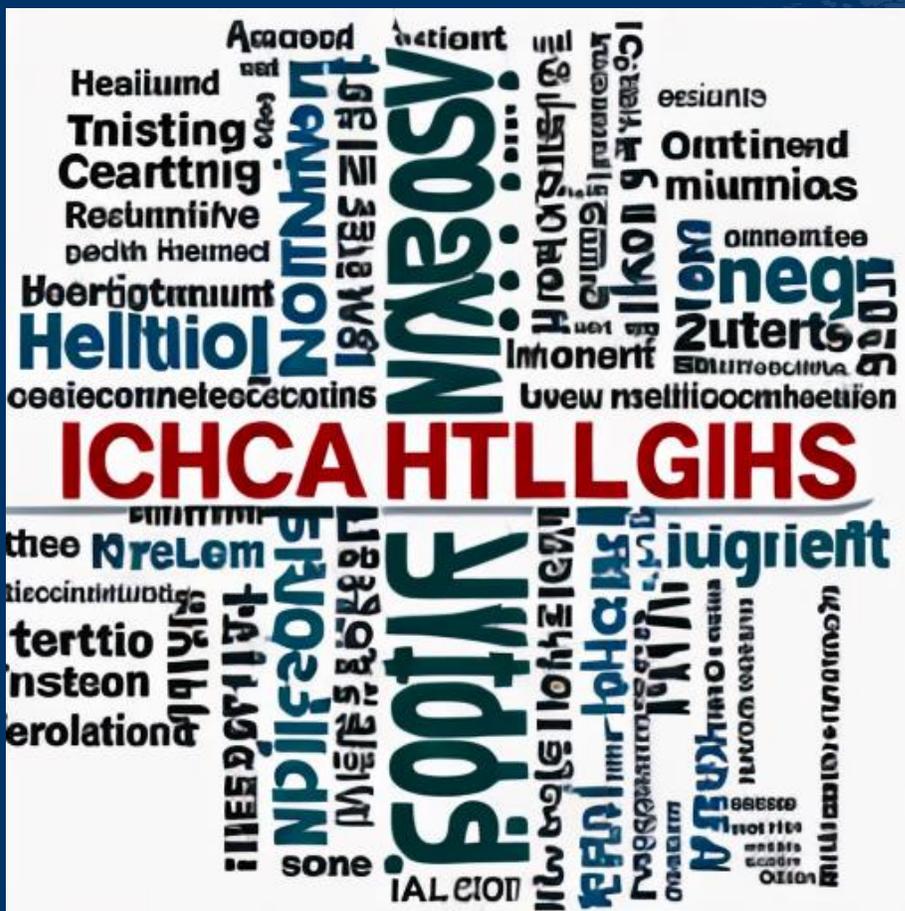


Small provider economics



Hospital scale - less cost-sensitive,  
different needs

# The Result: Digital Healthcare Chaos



- ✗ No cross-border interoperability
- ✗ Duplicate standards and certifications
- ✗ Impossible for vendors to scale
- ✗ Patients lose care continuity
- ✗ X-times development costs for European coverage

**„The Vision:  
A Unified European  
Health Space based  
on open standards**

” Matrix protocol +  
healthcare extensions  
= European  
interoperability

# What We Really Need: Coordination



## The Approach

- 🌐 People move cross-border → solutions must follow
  - 🔗 Standardized Matrix healthcare extensions
    - 📄 Shared certification processes
  - 💰 Economies of scale for smaller countries

# Why CGM is Uniquely Positioned

## Market Presence

-  Largest European footprint
-  Healthcare focus
-  30+ years European market experience
-  End-to-end supply chain

## Matrix Expertise

-  Deep Matrix knowledge
-  Real production deployments
-  Decades of regulatory experience
-  Production-ready solutions



## European DNA

-  Understand regulatory complexity
-  Multi-country operations
-  Government relationships

# Idea: Matrix Foundation Healthcare Working Group



## Mission:

- 🎯 Standardize healthcare-specific Matrix extensions
- 📄 Define European interoperability requirements
- 🔗 Foster cross-border collaboration



## Working Group Structure:

- 🏥 Healthcare
- 💻 Technology vendors
- 🏛️ Regulatory bodies
- 🎓 Academic institutions



## Deliverables:

- 📄 Healthcare Matrix Profile
- 🔧 Technical reference implementation where needed
- 📄 Certification guidelines

# „Join the Healthcare Bridge Builders

# CONTACT



[/in/pbrendamour](https://www.linkedin.com/in/pbrendamour)

Patrice.Brendamour  
@cgm.com



„Thank you!