



Fraunhofer Institute for Digital Medicine MEVIS

**gammaSTAR** is a platform for developing, simulating, and reconstructing vendor-neutral MR sequences.

Integrating **gammaSTAR** potentially saves time and costs in clinical workflows by improving MRI compatibility and reducing manual sequence adjustments and interactions. In large imaging studies, it maintains consistency across multiple devices.

The web-based framework enables MR pulse sequence development with real-time visualization and customization, accelerates development through simplified coding, and delivers universal, ready-to-use results.

We offer a library of vendor-neutral MRI techniques for conventional and advanced imaging with consistent performance across platforms. **gammaSTAR** includes mature MRI driver software ensuring compatibility across MRI models, enabling plug-and-play integration of generalized MR sequences without vendor-specific adjustments.









Dr. Daniel Christopher Hoinkiss
Tel. +49 421 17879-2152
daniel.hoinkiss@mevis.fraunhofer.de

Fraunhofer Institute for Digital Medicine MEVIS Max-von-Laue-Strasse 2 28359 Bremen, Germany www.mevis.fraunhofer.de

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Hardware-Agnostic MRI Framework

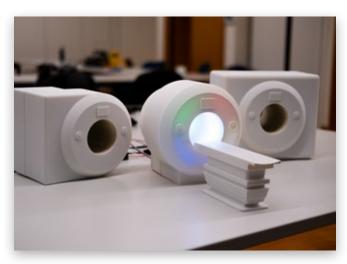
## Solution

**gammaSTAR** represents the next step in the development of MR pulse sequences and provides a universal format that is compatible with different MRI models, software versions and vendors

This solution eliminates reliance on scanner-specific sequences, enables seamless integration and accelerates the transfer of MRI technology into clinical settings.

The development potential of **gammaSTAR** lies in expanding its library of MR sequences and making them available for clinical use in conjunction with certified vendor interfaces. Collaboration with MRI manufacturers and the integration of advanced imaging techniques will be key to achieve widespread clinical adoption.

We are looking for partners from industry to make use of custom-built quality-assured MR sequences for clinical use and trials.



The gammaSTAR framework is demonstrated at RSNA by interactively controlling 3D models of MRI scanners



Our gammaSTAR driver software allows seamless integration for running gammaSTAR MR sequences on different MRI systems

### **Benefits**

**gammaSTAR** is a powerful framework that offers benefits for various user groups.

MR Sequence Developers benefit from a simplified development process using **gammaSTAR's** modular sequence design, which allows easy testing and quick design. It also provides ready-to-use, sustainable, configurable, dynamic, and real-time capable MR sequences.

Clinicians and Researchers benefit from cross-vendor MRI compatibility, reducing hardware costs, simplifying multi-center studies, and improving efficiency by minimizing sequence adaptation and accelerating the transition from research to clinical use.

Clinic Managers can cut costs by using different MRI models in studies without sacrificing image consistency.

Patients indirectly benefit from faster, more efficient imaging processes, ensuring consistent diagnostic quality across multiple systems.

# **Key Features**

#### **Universal MR Pulse Sequences**

**gammaSTAR** offers hardware-independent MRI techniques using a novel sequence description language, ensuring compatibility across vendors.

#### **Dynamic Sequence Adaptation**

With **gammaSTAR**, MR sequences can be configured directly at the MRI machine and adjusted in real-time during examination, providing unmatched flexibility and advanced MRI techniques.

# User-friendly Web Interface and Mature Sequence Library

**gammaSTAR** offers intuitive development with a stateof-the-art sequence module database that enables easy exploration of MR sequences.



gammaSTAR frontend for intuitive MR sequence development

