

Novius, the National Cancer Center Japan and Asahi Central Hospital file joint patent for real-time 2D-3D IVR imaging.

Novius the National Cancer Center and Asahi Central Hospital File Joint Patent Application for RealTime 2D3D Image Assistance Technology for IVR and Angiography

HACHIO-JI, TOKYO, JAPAN, July 21, 2026 /EINPresswire.com/ -- Enabling the Advancement of Real-Time 3D Intraoperative Decision Support Technology in Clinical Settings.



Company LOGO

Invention Title: Medical Image Display System (Commonly Known as: Real-Time 2D-3D Intraoperative Decision Support Technology)

Applying Party: Novius Co., Ltd.
National Cancer Center Japan
Asahi Central National Health Insurance General Hospital

Inventors: Yukihiro Yoshida, Koji Okawa

Patent Summary

This patent relates to image-guided technology that generates and displays three-dimensional spatial information in real time from two-dimensional image data acquired during surgery, based on the results of collaborative research.

In recent years, in the fields of radiological diagnostic imaging and interventional radiology (IVR), the demand for real-time image-guided technology during surgery has been growing worldwide, driven by advances in high-precision diagnostic imaging and the widespread adoption of minimally invasive treatments. On the other hand, a major challenge with conventional image-guided techniques using 3D-DSA (three-dimensional digital subtraction angiography) or CBCT (Cone-Beam CT) is that acquiring and reconstructing 3D images, as well as registering them with

intraoperative images, takes a certain amount of time.

(Conventional Technology)

It can take several tens of seconds to construct and display a 3D image from image data acquired during surgery.

Research Background

To estimate and visualize 3D structures in real time from 2D medical images acquired during surgery, and to realize an image-guided environment integrated with clinical workflows. Furthermore, in endovascular procedures, it is necessary to understand complex branching vascular structures and overlapping anatomical structures using only 2D images, which requires the operator to possess a high level of experience and spatial awareness. Furthermore, there are situations where it is difficult to intuitively grasp the relative positions of lesions and medical devices due to patient movement, organ displacement caused by breathing, and overlapping blood vessel courses.

Against this backdrop, the National Cancer Center Hospital, Asahi Central Hospital, and our company began a joint research project in September 2024 to develop next-generation intraoperative image assistance technology that generates and displays three-dimensional spatial information in real time from 2D medical images acquired during surgery.

Future Outlook

Moving forward, we will continue to evaluate the performance of this technology and verify its clinical utility. At the same time, with an eye toward applying this technology to medical devices in the fields of interventional radiology (IVR) and surgical navigation, we will promote its societal implementation through research and development, technical implementation, collaboration with domestic and international manufacturers, and licensing.

A Final Notice

This research aims to contribute to improving diagnostic and therapeutic accuracy and reducing the burden on medical staff by supporting the operator's spatial awareness. In the future, we also aim to apply this technology to a wide range of fields, including interventional radiology (IVR), angiography, surgical navigation, endoscopic ultrasound (EUS), and endobronchial ultrasound (EBUS).

Company Overview

Founded in 2016, Novius, Inc. is an AI technology company engaged in research, in-house

development, and contract work in the fields of medical imaging and artificial intelligence. Utilizing computer vision and real-time processing technologies, the company is driving the development of next-generation industrial imaging technologies and diagnostic support platforms.

Ike Nakamine

Novius Inc

+81 42-683-1178

[email us here](#)

Visit us on social media:

[LinkedIn](#)

This press release can be viewed online at: <https://www.einpresswire.com/article/927030536>

EIN Presswire's priority is source transparency. We do not allow opaque clients, and our editors try to be careful about weeding out false and misleading content. As a user, if you see something we have missed, please do bring it to our attention. Your help is welcome. EIN Presswire, Everyone's Internet News Presswire™, tries to define some of the boundaries that are reasonable in today's world. Please see our Editorial Guidelines for more information.

© 1995-2026 Newsmatics Inc. All Right Reserved.