

The AMPS Insider

An AMPS LLC Magazine

The AMPS Insider is a quarterly magazine dedicated to all AMPS' partners and customers. Published by AMPS, it provides news and information about AMPS' products and initiatives.

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Executive Overview

This is a new Magazine in format and purpose, with updates on our most recent software releases and announcements on new products.

Editorial

Welcome to our first issue of *The AMPS Insider* (or **TAI**), our new quarterly AMPS Magazine. After 20 years of successful issues of the AMPS-QT, we decided it was time for a change, time to re-energize our focus on how we communicate with our customers. As a result, **TAI** now becomes our primary communications tool between AMPS and our customer base and new clients. Within the **TAI** will be the latest information on new trends, new methods, and new tools from AMPS. Additionally, we encourage our customers to stay in touch with AMPS and suggest ideas for articles or comment on published articles. It is very important to our team to listen to our current and future customers, so please send your ideas and comments to marketing@amps-llc.com.

Currently, as we know all too well, we are in the midst of a struggle with the effects of the global COVID-19 pandemic. International travel is in turmoil, and it is next to impossible for conferences and events to be held, and most have been cancelled for 2021. Add to the struggle all of the doctors, nurses, and ambulances and emergency workers who are on the front line facing the storm, risking their own lives helping people, and going above and beyond on a daily basis. In contrast, many of us have not seen our offices in months, while we work from home and develop new ways of working to cope without the dynamics of office life. New ways to leverage the Internet from home has kept many industries functioning at near normal efficiencies. Even the world of cardiac safety feels the impact as well, in ways that nobody could have imagined only a year ago. As more data

comes in from all over the world, cardiac experts now believe that the COVID-19 virus can infect the heart muscle. An initial study reported in Scientific American, found cardiac damage in as many as 1 in 5 patients, leading to heart failure, and death even among those who show no signs of respiratory distress. (Source:

<https://www.scientificamerican.com/article/heart-damage-in-covid-patients-puzzles-doctors/>).

Consequently, we now have an urgent and rapid need to perform ECG examinations for people isolated in their homes. The primary need extends to monitoring those with existing pathologies, but also to monitor the health of people affected by the virus. Since the beginning of the emergency, AMPS has been swamped by requests, from both existing and new customers, seeking an available technology to perform ECG exams remotely. In fact, AMPS had recently developed a fully functional telecardiology platform which collects and transmits ECG traces, via the internet, to cardiologists at their offices, hospitals, or home. This is done through a heterogeneous variety of devices, from body sensors to a full 12-lead electrocardiograph (see AMPS-QT n28 4Q2015 for a description of the system here:

<http://www.ampsmedical.com/Services/Telecardiology>

Despite the AMPS research center location in the province of Brescia, in Lombardy, once the epicenter of the Italian COVID-19 crisis, we have been working from home non-stop, to support the implementation of several different projects for our customers. As a result of this intense effort, several patches and handheld ECG devices by AliveCor, VivaLNK, and DMS Service are now fully compatible with the AMPS software tools.

Products News

In 2020, AMPS sought the certification of the Continuous ECG Recordings Suite for the use in the healthcare market.

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Approval was granted for the Conformité Européene (CE) Mark, and later FDA clearance was obtained through the 510(k) process for CER-S v4.0 as a medical device.

In the past year AMPS released:

- Two major releases of CER-S (Continuous ECG Recording Suite) v4.1 and v 4.2, with the latter awaiting CE approval having already received FDA clearance. This version greatly improves the prior certified version with an enhanced graphic interface which provides a smooth and faster editing of automatically detected arrhythmic events.
- Updated version v4.1.0 of CalECG (AMPS solution for on-screen measurement of ECG signals) including:
 - New BRAVO algorithm optimized for ECGScan-based ECGs and longer signals up to several minutes.
 - Enhanced report generation.
 - Compatibility with ECGs from GE MAC2000.
 - Compatibility with Windows Server 2019 operating system.
- Updated version of Antares (smart snapshot extractor) from Holter recordings with enhanced BRAVO algorithm for optimal Representative Beat creation.
- The first version of the converter from Hillrom/Mortara H-Scribe v6 to ISHNE format.

Looking forward

We are at work on:

- A new release of CER-S (v4.3) with several enhancements including optimized multi-day reporting, increased limit for standard analysis on long recordings, superimposition display.
- A new version of ViewEcg Web allowing for display of ECG traces in real-time.

- The integration of CineECG (<https://www.ecg-excellence.com/2960/0/products/general/0/cineecg>) in CalECG for enhanced ECG reporting.

AMPS Notebook

Last February 2021 AMPS released the following announcement:

A.M.P.S. LLC and Cardioline SpA are pleased to announce a new partnership with the parties working together to provide joint solutions in the clinical trials market. This arrangement will combine leading software analytics utilized by AMPS along with the high-performance devices of Cardioline to provide an end-to-end solution for companies serving the clinical trials market. “Since its inception AMPS has been actively pursuing the compatibility of its software analysis tools with the most popular electrocardiography equipment available on the market” said Fabio Badilini Phd. F.A.C.C., President and Chief Scientist of AMPS. “We are extremely pleased to be able to now directly interface also with the high quality products of Cardioline”.

While AMPS has been serving this market since 1999, Cardioline is only recently entering this market, incorporating required security and workflow functionality into its device portfolio to offer customers a new option in the market. “Cardioline is excited to begin this new relationship with AMPS, combining best in class software analysis with our own best in class devices, to provide a full featured solution in today’s market,” said Brian Brenegan, CEO of Cardioline. “We see tremendous growth opportunity ahead of us and look forward to working with AMPS to further improve our joint functionality in this exciting market.”

Troubles with your ecg data?? AMPS can help you!

- ❖ Conversion of ecg paper traces (or scanned images) into digital HL7 FDA xml ecg files
- ❖ Conversion of proprietary digital ecg files formats into the HL7 FDA xml ecg format
- ❖ Validation of HL7 FDA xml ecg and continuous recording ecg files prior to submission to the FDA ECG Warehouse
- ❖ Submission of HL7 FDA xml ecg files to the FDA ECG Warehouse
- ❖ Secondary analysis of studies via state-of-the-art analysis such as: HRV, Holter Bin, B2B.

For further information or questions please contact: AMPS.Services@amps-llc.com