Improving access to medical knowledge
The Cardionetworks Foundation is a non-profit organization founded in 2007 and based in The Netherlands. The goals of the foundation are: “to improve medical knowledge, especially in the field of cardiology, and to provide access to this knowledge by facilitating publications in digital or other form, amongst other means by building and maintaining websites.” As a not-for-profit organization, all revenues are spent in the pursuit of this cause.

Cardionetworks manages specialized websites, providing high quality and up-to-date information freely to physicians all around the world. Our websites are all published under a creative commons license and the information is accessible without login or registration.

Make a donation

As a charitable enterprise, we rely entirely on the generosity of our supporters to allow us to continue in our work. To join our growing list of supporters please contact vanderwerf@cardionetworks.org to discuss the best way to contribute.

Every cent you are able to give helps us further promote free global access to vital medical information and resources.

Thank you for your generosity.
MESSAGE FROM THE FOUNDATION BOARD

Welcome to the 2016 annual report of Cardionetworks. Since its inception in 2007, the goal of the Cardionetworks Foundation has been to provide free and open access to unbiased and up-to-date medical knowledge to the global medical community. The non-profit organization enjoys a significant international online presence from its base in The Netherlands.

The foundation publishes and maintains a series of websites offering physicians, nurses and students invaluable, reliable and up-to-date information on certain specialized subjects. Our websites are published under a creative commons license, allowing free, global access without login or registration.

We are delighted to report that the number of visitors to Cardionetworks websites still continues to increase.

This year we reached a little over 2.3 million visits, somewhat less as compared to last year (almost 2.5 million). This decrease in numbers could be due to a server change which jeopardized an accurate count. The average time each visitor spent on the website was around 2 minutes. Our global reach now extends to 227 countries, and we are particularly proud that increasing numbers of our visitors are located in developing countries. India for example has remained at the 4th place in our visitor statistics and Malaysia and the Phillipines have remained 8th and 9th position again. We are grateful to dr. Alex Hovner who contributed immensely to ECHOpedia.org. This also spurred visitor numbers with over 200,000 extra visitors compared to last year.

Fundraising remained extremely challenging in this tough economic era. In 2013 and 2014 we were unable to raise enough funds to create a buffer for the medium-term future of Cardionetworks. Despite of our efforts also this year to raise funds through public funding and grants, we did not reach the final rounds for these grants. Since our development of SYNCQpedia.org in 2015 we further developed this new website together with the stakeholders, and we able to retain enough funding for our balance. These funds were used to expand and increase the quality of the website content, to move all websites to new dedicated servers (again), adoption of the Cloudflare software to ensure faster and more reliable access from all over the world and to print updated ECGpedia, ECHOpedia and PCIpedia reference cards that are sold online. The reference cards are now our main asset. None of the achievements of this year, or during the lifetime of Cardionetworks, would have been possible without the tremendous efforts of the many volunteers who have helped in the process. As always, the foundation board is grateful for all the work and time that have been freely given to make this project such a success.

Jonas de Jong, MD, PhD, Chair
Pieter Postema, MD, PhD, Secretary
Christian van der Werf, MD, PhD, Treasurer

The Cardionetworks foundation board.
The general trend is still towards continued increase in visitor numbers to both the English and Dutch versions of ECGpedia (en.ECGpedia.org and nl.ECGpedia.org). The English version of ECGpedia is still our most frequently visited website, but attracted less visits compared to last year (1.68 million compared to 1.82 million). However, due to a server change, our visitor numbers are probably an underrepresentation.

The majority of visitors located the site through a search engine. A variety of search terms were used to locate the site, including “myocardial infarction”, “pathologic q waves”, “QTc calculator”, and “QRS axis”, demonstrating the genuine need for this service.

A total of 70% of visitors were new to en.ecgpedia.org during 2016.

**VISITORS STATISTICS**

The Cardionetwork Foundation – Annual Report 2016

- Visitor statistics of en.ECGpedia.org in 2016

<table>
<thead>
<tr>
<th>Country/Territory</th>
<th>Acquisition</th>
<th>Behavior</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sessions</td>
<td>New users</td>
</tr>
<tr>
<td>United States</td>
<td>1,677,027 (100.00%)</td>
<td>1,168,024 (100.08%)</td>
</tr>
<tr>
<td>Netherlands</td>
<td>510,283 (30.43%)</td>
<td>283,997 (24.31%)</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>97,154 (5.79%)</td>
<td>75,300 (6.45%)</td>
</tr>
<tr>
<td>India</td>
<td>74,509 (4.44%)</td>
<td>55,333 (4.74%)</td>
</tr>
<tr>
<td>Belgium</td>
<td>89,118 (5.36%)</td>
<td>54,729 (4.69%)</td>
</tr>
<tr>
<td>Australia</td>
<td>43,930 (2.62%)</td>
<td>34,506 (2.95%)</td>
</tr>
<tr>
<td>Canada</td>
<td>41,593 (2.48%)</td>
<td>32,670 (2.80%)</td>
</tr>
<tr>
<td>Malaysia</td>
<td>18,282 (1.09%)</td>
<td>13,748 (1.18%)</td>
</tr>
<tr>
<td>Philippines</td>
<td>15,393 (0.92%)</td>
<td>12,579 (1.08%)</td>
</tr>
<tr>
<td>Saudi Arabia</td>
<td>12,926 (0.77%)</td>
<td>9,501 (0.81%)</td>
</tr>
</tbody>
</table>
The geographical distribution of visits to en.ecgpedia.org is shown in the map. The majority of users continue to be based in English-speaking countries. However, visitors from countries such as India, the Philippines and Malaysia represent a significant proportion of our users.
CARDIONETWORKS:
A TIMELINE OF ACHIEVEMENT

Highlights of 2016

Over 2.3 million visits from 227 countries were logged, with an average visit lasting around 2 minutes.

Server upgraded once more to meet continuing and increasing demands and introduction of CloudFlare to be able to regulate the continuing increase in visitors from all over the world.
First online Dutch ECG course available at www.drj.nl.

April 2005

Launch of ECGpedia.nl.

February 2006

Launch of nl.ecgpedia.org.

March 2006

Founding of the Cardionetworks Foundation.

May 2007

Translation of ECGpedia from Dutch into English initiated. Launch of en.ecgpedia.org.

May 2007

Launch of the De Voogt Archive, an online ECG archive housing more than 2000 ECGs.

July 2007

A total of 90,000 visits to the Dutch site and 4,500 to the English site recorded. Google has 673 search-hits on 'ECGpedia'.

March 2008

1,000,000th pageview recorded on ECGpedia.

April 2008

Foundation awarded first prize for 'young talent' at a Dutch e-learning symposium.

September 2007

120,000th visitor logs on to the Dutch ECG site.

November 2007

Conclusion of a successful fundraising campaign. Premium donations received from Novartis, St. Jude Medical, Philips Medical and Boston Scientific.

March 2008

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Conclusion of a successful fundraising campaign. Premium donations received from Novartis, St. Jude Medical, Philips Medical and Boston Scientific.

March 2008

1,000,000th pageview recorded on ECGpedia.
Cardionetworks’ first project was ECGpedia.org, an online electrocardiography course. We have since created, and continue to maintain, around 30 individual websites, all dedicated to improving medical knowledge in the field of cardiology. We subscribe to the HONcode principles of the Health On the Net Foundation.

Anyone can contribute to Cardionetworks through Mediawiki software. We welcome all improvements to our websites. All suggestions for improvement are screened by physician moderators.

ECGpedia

ECGpedia is a free electrocardiography (ECG) course and textbook designed for medical professionals such as cardiac care nurses and physicians. It is the primary website of the CardioNetworks Foundation. Since its foundation ECGpedia has become an important source of up-to-date information on ECG interpretation. The website now includes more than 2500 example ECG’s provided by contributors around the world. Current efforts are directed towards improvement of the readability of the websites, more interactivity with visitors (quizzes and polls). A comprehensive online ECG basics course with exam is now available (moodle.ecgpedia.org). In addition, an iBook version of the website has been developed.

Textbook of Cardiology

The Textbook of Cardiology is an up-to-date and freely accessible online cardiovascular reference work. This is a project in collaboration with the Health[e]Foundation. The Health[e]Foundation has much experience with HIV education for medical professionals in developing countries. Requests came forward from participant for cardiovascular education. In collaboration the textbook has now been written. It will be made available online by Cardionetworks and offline by the Health[e]Foundation which will include the text on USB sticks that are distributed through their network.
Contributors to the online Textbook of Cardiology

Editors

- Jonas S.S.G. de Jong, MD, PhD, FESC, OLVG, The Netherlands
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- Wouter Kok, MD, PhD, AMC, The Netherlands
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- Hayang Yang, AMC, The Netherlands
- Esther Wiegerinck, AMC, The Netherlands
- Arthur Wilde, MD, PhD, AMC, The Netherlands
- Janneke Wittekoek, MD, PhD, The Netherlands
- Pier Woudstra, MD, AMC, The Netherlands
Echopedia

Echopedia is a free echocardiography textbook, designed for medical professionals such as cardiologists and echocardiography technicians. The site is still under development. Echopedia now contains more than 900 echocardiogram images from more than 170 cases provided by the AMC Echolab. An overview of all echocardiographic normal values is now presented on the website. In 2013 we received an excellent contribution of basic text chapters that were missing and are currently being converted to the website format.

PCIpedia

PCIpedia is a free textbook on intervention cardiology, designed for medical professionals such as cardiologists and cathlab technicians. The site is still under development. The first batch of coronary angiography cases is now online. Also, a start has been made to introduce visitors to angiographic coronary anatomy and technique. A pocket reference card has been developed and printed to give a quick review of coronary angiographic views.

BrugadaDrugs.org

The Brugada syndrome has been recognized as an important cause of sudden cardiac death in individuals at a relatively young age. Many drugs have been associated with adverse events in Brugada-syndrome patients. These drugs may either induce life-threatening ventricular arrhythmias and/or induce the characteristic Brugada syndrome-linked ECG abnormalities which are associated with poor outcome.

BrugadaDrugs.org provides an overview on the available evidence and expert opinion regarding drug safety in Brugada syndrome. And is the result of a recently performed review of the literature. BrugadaDrugs.org ensures worldwide and up-to-date availability of this knowledge base to physicians and patients. This site was launched by Pieter Postema and is hosted by Cardionetworks.

Foundation websites

www.brugadadrugs.org
www.cardiolinks.org
www.cardionetworks.org
www.ecgpedia.org
www.ecgpedia.org
www.echopedia.org
www.pcipedia.org
www.syncopedia.org
www.textbookofcardiology.org
www.thefailingheart.org
www.thrombopedia.org
Offline content

While the majority of our effort at Cardionetworks is focused towards delivering high-quality, freely-available medical information over the Internet, we also offer certain information and training offline.

ECGpedia pocket cards are available and have been proved very popular. They can be printed out online, and ordered in a full colour and laminated print. More than 12000 preprinted cards have been distributed.

Live ECGpedia courses have proved very popular amongst the following groups:

- Dutch medical students
- Anesthetist residents
- General practitioners
- Junior doctors
- Anesthesia and internal medicine residents

A PCIpedia pocket card has been published

An Echopedia pocket card has been published
FOUNDATION BOARD

Jonas S.S.G. de Jong, MD, PhD, FESC
Chair
Cardiologist, Electrophysiologist
Onze Lieve Vrouwe Gasthuis
The Netherlands.

Pieter G. Postema, MD, PhD
Secretary
Cardiologist, Electrophysiologist
Academic Medical Centre, University of Amsterdam
The Netherlands.

Christian van der Werf, MD, PhD
Treasurer
Cardiology resident
Academic Medical Centre, University of Amsterdam
The Netherlands.
COMMERCIAL BENEFactor OF THE FOUNDATION IN 2016

St. Jude Medical

PREVIOUS YEARS COMMERCIAL SPONSORS

MSD, Servier, Novartis, Biotronik, Boston Scientific, Medtronic
## FINANCIAL REPORT

### Accounts 01.01.2016

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<th>Revenues</th>
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<td>Website development</td>
<td>Webhosting costs</td>
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<tr>
<td>Reference card &amp; book revenues</td>
<td>Content development &amp; office</td>
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<tr>
<td></td>
<td>Reference cards</td>
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| 3511                            | 104                  |
| 2010                            | 104                  |
| 6870                            | 1934                 |
| 1369                            | 834                  |
| 1369                            | 439                  |
| 439                             | 0                    |
| **10248**                       | **3310**             |


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<th><strong>Total</strong></th>
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<tr>
<td>10449</td>
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CARDIONETWORKS’ MISSION

“To improve medical knowledge, especially in the field of cardiology, and to provide access to this knowledge by facilitating publications in digital or other form, amongst other by building and maintaining websites.”
The Cardionetworks Foundation

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info@cardionetworks.org

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KVK 34274298

The Dutch Tax Administration has designated the Cardionetworks Foundation as an Institution for General Benefit (ANBI, Algemeen Nut Beogende Instelling). Gifts to the Cardionetworks Foundation can be tax deducted in the Netherlands. This not only applies to the deduction of donations for the income tax but also to the company tax and inheritance tax.
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