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0 Publications ULIMPIA

0.1 Year 1

1. Ronald Dekker, "Health.E, Accelerating innovation in Medical Devices. Enabling "Moore for Medical"", kick-off of the Strategic Governing Group "Digital Health & Patient-Centric Evidence Generation" from IML. Location headquarters Sanofi Paris, 20th of April 2018 [Doc_0]
2. John Schmitz (Dean of EWI faculty Delft University) and Mart Graef, "Micro- and Nano-Electronics in The Netherlands," presentation at the 2018 Sino-Dutch International High Level Talent Forum and Summer School on Semiconductor Technologies, Tsinghua University, Beijing, China, July 9, 2018 [Doc_7]
3. Ronald Dekker, poster presentation of the Health.E lighthouse referencing the POSITION project as cornerstone as well as the ULIMPIA project. at the 2018 ECSEL Symposium 19-21 June 2018 Brussels. [Doc_12]
4. The Autumn 2018 number of the EU Research magazine featured an extensive article on the Health.E lighthouse. In the article the InForMed, POSITION as well as the ULIMPIA projects were referenced. The article is available on-line from the [EU Research Magazine website](https://issuu.com/eu_research/docs/informed_h_res_eur17) [Doc_24].
https://issuu.com/eu_research/docs/informed_h_res_eur17
5. The ULIMPIA project was part of a presentation to tell the internal Philips organization about the content and organization of European projects. The presentation was held at the High Tech Campus the 4th of October 2014 and webcasted to Philips worldwide. After the presentation there was a poster session in which PPP projects were presented. [Doc_25]
6. The ULIMPIA project was part of a presentation on Innovation in Medical Devices in an invited presentation during the [Microelectronic Circuit Centre Ireland annular 2018 Forum](https://www.mcci.ie/mcci-annual-forum-2018/) in Cork the 11th of October 2018 <https://www.mcci.ie/mcci-annual-forum-2018/> [Doc_31]
7. Chris van Heesch (Philips), invited presentation at the [IEEE International Ultrasonics Symposium \(IUS\) 2018](http://sites.ieee.org/ius-2018/), "Collapse -mode CMUT: design and characterization" 22-25 October 2018, Kobe Japan. The paper received the conference highlight award. <http://sites.ieee.org/ius-2018/> [Doc_34]
8. Every year PhDs and PostDocs at Philips Research organize an event during which they tell the Philips community about their research projects. On the 1st of November 2018 this also included contributions from PhD students working in the European projects ULIMPIA and POSITION [Doc_36].
9. During the Medical MEMS and Sensors conference 7-8 Nov 2018 at Santa Clara California, Rob van Schaijk from Philips Innovation services gave a presentation entitled "CMUT and PMUT: New Technology Platform for Medical Ultrasound," During the stand Philips was also present with a company booth <http://www.medicalmemsconference.com/> [Doc_39]
10. The 13th of November 2018 Ronald Dekker presented an Invited presentation entitled "Moore for Medical," at the Semicon Europe conference 2018 in Munich. The presentation disseminates the goals of the lighthouse and introduces projects like POSTION, ULIMPIA and ORCHID. <http://www.semiconeuropa.org/flex-europe-be-flexible> [Doc_40]



11. Partner Novioscan gave a presentation and presented a poster at the ICCS 2018 conference in Rome (International Children's Continence Society) <https://www.iccs2018.info/> [Doc_42]
12. Christof Landesberger from Fraunhofer EMFT gave a presentation "Towards R2R manufacture of Flexible Hybrid Electronics – Technology Roadmap at Fraunhofer EMFT," during the ["2018 Flex Europe - Be Flexible"](http://www.semiconeuropa.org/flex-europe-be-flexible) conference parallel to the Semicon Europe the 13th of November 2018. <http://www.semiconeuropa.org/flex-europe-be-flexible> [Doc_40]
13. Carsten Linti from Deutsche Institute für Textil- und Faserforschung (DITF) gave a presentation "Laser-Direct-Structuring of Flexible Textile Circuits," during the ["2018 Flex Europe - Be Flexible"](http://www.semiconeuropa.org/flex-europe-be-flexible) conference parallel to the Semicon Europe the 13th of November 2018. <http://www.semiconeuropa.org/flex-europe-be-flexible> [Doc_40]
14. The ULIMPIA project was represented with a 3 poster booth including demo-material at the 2018 EF ECS. 20-23 November, Lisbon 2018. [Doc_43]
15. As part of the Health.E lighthouse, the ULIMPIA project was presented during the high level conference organized by DG-RTD "The impact of EU research and innovation on your daily life" the 27th of November 2018. Location was the meeting space directly in front of the hemicycle European parliament in Brussels. The stand was very well received and visited by EU parliament president Tajani, DG-RTD (innovation) commissioner Moedas and MP Lambert van Nistelrooij. [Doc_45]
16. The demonstration in the EU parliament of the InForMed project at the EU parliament was highlighted in an article in the online newsletter Philips Global News. The article placed the InForMed project in the context of both the POSITION and the ULIMPIA (PENTA) as well as the Health.E lighthouse [Doc_46]
17. The magazine SciTech Europe Quarterly published an interview with Ronald Dekker about the recently established Health.E lighthouse. The interview also references the ULIMPIA project. SciTech Europe Quarterly, December 2018, issue 29 [Doc_47]
18. The Artemis Magazine featured an extensive interview on the Health.E lighthouse entitled "Health.E lighthouse; 'Moore for Medical': accelerating innovation in medical devices" by Chris Horgan, Artemis Magazine No. 25, December 2019 [Doc_66].
19. Reinout Woltjer from partner Novioscan gave a presentation entitled "from clinical need to medical product" at the Wearable Technologies EUROPE 2019 conference, 3-6 February in Munich. <https://www.wearable-technologies.eu/> [Doc_53]
20. Ronald Dekker, Philips Research, "Emerging technologies in healthcare, the opportunities and challenges," presentation during the Artemis Technology Conference 2019, Amsterdam, The Netherlands [Doc_62]
21. P.G. van Leuteren from Novioscan presented a presentation entitled "Sens-U: continuous home monitoring of nocturnal bladder filling in children with enuresis – a feasibility study-" at the 30th ESPU (European Society for Pediatric Urology) in Lyon France the 29th of April 2019 <https://congress2019.espu.org> [Doc_65]
- 22.



The Autumn 2018 number of the EU Research magazine featured an extensive article on the Health.E lighthouse. In the article the InForMed, POSITION as well as the ULIMPIA projects were referenced. The article is available on-line from the EU Research Magazine website [Doc_24].



The ULIMPIA project was part of a presentation to tell the internal Philips organization about the content and organization of European projects. The presentation was held at the High Tech Campus the 4th of October 2014 and webcasted to Philips worldwide.

After the presentation there was a poster session in which PPP projects were presented. [Doc_25]



Chris van Heesch gives an invited presentation at the IEEE International UltraSonic Symposium 2018 in Kobe Japan. The presentation was designated a "Conference highlight"



PhDs and PostDoc students tell the Philips community about their research project in European projects like POSITION and ULIMPIA, 1st Nov 2018.



Impressions of the Philips Booth and presentation during the "Medical MEMS and Sensors" conference in Santa Clara California [Doc_39]



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Impression of the presentation and poster of partner Novioscan at the ICCS 2018 conference in Rome (International Children's Continence Society)
<https://www.iccs2018.info/> [Doc_42]



Christof Landesberger (left) Ronald Dekker (right) ad Carsten Linti (not shown) gave presentations during the "2018 Flex Europe - Be Flexible" conference 13-14th Nov 2018 in combination with the Semicon in Munich [Doc_40]



The ULIMPIA poster booth at the 2018 EFECS, Lisbon, 20-22 Nov 2018 [Doc_43]



As part of the Health.E lighthouse, the ULIMPIA project was presented during the high level conference organized by DG-RTD "The impact of EU research and innovation on



your daily life” the 27th of November 2018. Location was the meeting space directly in front of the hemicycle European parliament in Brussels. The stand was very well received and visited by EU parliament president Tajani, DG-RTD (innovation) commissioner Moedas and MP Lambert van Nistelrooij. [Doc_45]

InForMed project highlighted during H2020 event at the European parliament

News Item

The ECSEL Joint Undertaking project InForMed was selected for a demonstration during the high-level conference “EU research and innovation in our daily life,” the 27th of November. The location was the European Parliament building in Brussels directly next to the entrance of the Parliament hemicycle.

The demo included a novel electrophysiology catheter with ultrasound ablation monitoring combined with optical shape sensing (FORS). The demonstration was visited by parliament chairman Tajani, EU Commissioner Moedas, Director general Jean-Eric Paquet and many journalists and MPs.



Image 1: Abdul Mokadda demonstrated the InForMed ablation catheter to EU parliament president Tajani, DG-RTD Commissioner Moedas, Director general Jean-Eric Paquet and many journalists and MPs.

The InForMed project, which ended last September, concentrated on the realization of a manufacturing infrastructure for innovative microfabricated medical devices. The ablation catheter was just one of the 9 demonstrators in the project that additionally generated the Organ-on-Chip startup BU-OND, which was also presenting in Brussels. The project was initiated and coordinated by Philips. It included 39 partners from 10 countries and had a total budget of €58 Million.

Propt, Research and Philips Innovation Services have invested deeply in the development of technologies for MEMS ultrasound transducers and smart catheters. This work is supported by a series of large European projects which embed this work in a European network of technology supporters, academia and end-users.



Image 2: InForMed team and stand in front of the EU parliament hemicycle

After InForMed ended, the follow-up projects ULIMPIA (PENTA) and POSITION (ECSEL) concentrate on bringing the technologies to high TRL level open technology platforms for ultrasound, smart catheters and body patches. The recently established Health E Lighthouse, which builds on these cornerstone projects, promotes open technology platforms as a means to accelerate innovation in medical devices. Moore for Medical

For more information, please contact: Ronald Dekker

InForMed: <http://informed-project.eu/>
POSITION: <http://position-z.eu/>
ULIMPIA: <http://ulimpia-project.eu/>
Health E Lighthouse: <https://www.ec.europa.eu/health/e-lighthouse/>
BU-OND: <https://www.gatoond.com/>
Philips Fiber Optic Reshape (FORS): <http://www.philips.com/forp-technology>

The demonstration in the EU parliament of the InForMed project at the EU parliament was highlighted in an article in the online newsletter Philips Global News. The article placed the InForMed project in the context of both the POSITION and the ULIMPIA (PENTA) as well as the Health.E lighthouse [Doc_46]



The Artemis Magazine featured an extensive interview on the Health.E lighthouse entitled “Health.E lighthouse; ‘Moore for Medical’: accelerating innovation in medical devices” by Chris Horgan, Artemis Magazine No. 25, December 2019 [Doc_66]



The magazine SciTech Europe Quarterly published an interview with Ronald Dekker about the recently established Health.E lighthouse. The article also references the ULIMPIA project. SciTech Europe Quarterly, December 2018, issue 29 [Doc_47]



Reinout Woltjer from partner Novioscan gave a presentation entitled “from clinical need to medical product” at the [Wearable Technologies EUROPE 2019 conference](#), 3-6 February in Munich [Doc_53]



“Emerging technologies in healthcare, the opportunities and challenges,” presentation during the Artemis Technology Conference 2019, 16-17 April 2019 Amsterdam, The Netherlands [Doc_62]



P.G. van Leuteren from Novioscan presented a presentation entitled “Sens-U: continuous home monitoring of nocturnal bladder filling in children with enuresis – a feasibility study-“ at the 30th ESPU in Lyon France the 29th of April 2019 [Doc_65]



0.2 Year 2

1. The Health.E lighthouse was presented during the ECSEL symposium in Bucharest 17/18 June 2019. The poster presentation was part of four guided tours. In the presentation the POSITION project (separate poster) and the ULIMPIA as well as the ORCHID projects were highlighted. Romanian media recorded the poster presentation [Doc_70]
2. Marcin Meyer (KOB) "Smart medical textiles for wireless health monitoring," AUTEX 2019, 19th world Textile Conference, Textiles at the Cross roads on 13th June 2019 in Ghent. [Doc_71]
3. "Creating the future of healthtech," presentation by Willem van den Brink (Philips Innovation Services) at the [MicroTech Suedwest](#) in Freiburg, 19th July 2019. [Doc_75]
4. Mikko Matvejeff et al. (Picosun), "Hermetic Encapsulation with ALD for Improved Performance and Lifetime of Medical Devices," Presentation at the Semicon2019, SEMICON West 2019, July 9-11, San Francisco, CA. <https://www.semiconwest.org/> [Doc_78]
5. Juhana Kostamo et al. (Picosun), "Multi-layer stacked ALD coating for hermetic encapsulation of implantable biomedical microdevices," Presentation at the ALD2019, 21-24 July, 2019, Bellevue, Washington, USA. <https://ald2019.avs.org/> [Doc_79]
6. C. van Heesch et al. "CMUT for high volume low cost medical applications," 2019 ICU Bruges, 2019 International Congress on Ultrasonics, 3-6 September 2019 Bruges Belgium [Doc_84]
7. Shin Kawasaki et al. Ultrasound power transfer for implantable bioelectronics using trapped charge CMUTs," 2019 ICU Bruges, 2019 International Congress on Ultrasonics, 3-6 September 2019 Bruges Belgium [Doc_86]
8. Pieter Dik from NovioScan gave a presentation at the ICCS 2019 <https://www.iccs2019.com/> on the work they are doing in ULIMPIA [Doc_90].
9. Rob van Schaijk (Philips Innovation Services) gave a presentation entitled "CMUT: a versatile and low cost ultrasonic platform" during the MEMS & Imaging summit Grenoble 24-26 September 2019 [Doc_91]
10. M. Tan, (TUDelft) E. Kang, J.-S. An, Z. Y. Chang, P. Vince, N. S  n  gond, and M. A. P. Pertijs, "An integrated programmable high-voltage bipolar pulser with embedded transmit/receive switch for miniature ultrasound probes," in Proc. European Solid-State Circuits Conference (ESSCIRC), Krakow, Poland, Oct. 2019, pp. 325-328. [Doc_92]
11. In a presentation by Brown University School of Engineering, Providence RI, USA at the V2019 VAKUUM & PLASMA conference from 08 – 10. October 2019 in Dresden, Germany, results were shown that Picosun achieved in the ULIMPIA project. The title of the presentation was "Multi-layer stacked ALD coating for hermetic encapsulation of implantable biomedical micro devices," presented by Christoph Hossbach (Picosun). <https://www.efds.org/event/v2019-vakuum-plasma/> [Doc_95].
12. The Health.E lighthouse including results from ULIMPIA was presented during the two day workshop on Bio Electronics and Wearable Systems organized by the MNBS (DG Connect) the 22nd and 23rd of October 2019 in Brussels <https://ec.europa.eu/digital-single-market/en/news/workshop-smart-bioelectronic-and-wearable-systems> [Doc_97]



13. Hans Hofstraat, vice president and research program manager Royal Philips gave a presentation “Digital healthcare solutions – from big data to clinical impact,” which includes results from the ULIMPIA project at the Medtech & Pharma platform, 24th October 2019. [Doc_99]
14. Boris Bauer, Götz T. Gresser, „Temperaturregulatorische Individualisierung von Burn Garments,“ 38. Jahrestagung der Deutschsprachigen Arbeitsgemeinschaft für Verbrennungsbehandlung, 15.-18. Januar 2020, Zell am See. [Doc_108]
15. W.M.J. Kwinten et al. “SENS-U: continuous home monitoring of natural nocturnal bladder filling in children with nocturnal enuresis, a feasibility study,” In *Journal of Pediatric Urology Company*, 2020 pp. 1477-5131, <https://doi.org/10.1016/j.jpuro.2020.01.012>. [Doc_114]



The Health.E lighthouse was presented during the ECSEL symposium in Bucharest 17/18 June 2019. The poster presentation was part of four guided tours. In the presentation the POSITION project (separate poster) and the ULIMPIA as well as the ORCHID projects were highlighted.



Marcin Meyer (KOB) presenting at the 19th world Textile Conference (AUTEX19) June 2019 Ghent, and Facebook item related to the conference. [Doc_71]



“Creating the future of healthtech,” presentation by Willem van den Brink (Philips Innovation Services) at the MicroTech Suedwest in Freiburg, 19th July 2019. From left to right: Dr Alfred Stett, Retina Implant AG, Willem van den Brink, Philips Innovation Services, Prof Thomas Stieglitz, University of Freiburg, Roland Doerr, MicroTec Suedwest, and Reinhard Pusch, RoodMicrotec GmbH.



C. van Heesch et al. (Philips) "CMUT for high volume low cost medical applications," 2019 ICU Bruges, 2019 International Congress on Ultrasonics, 3-6 September 2019 Bruges Belgium [Doc_84]



Shin Kawasaki et al. "Ultrasound power transfer for implantable bioelectronics using trapped charge CMUTs," 2019 ICU Bruges, 2019 International Congress on Ultrasonics, 3-6 September 2019 Bruges Belgium [Doc_86]



Rob van Schaijk (Philips Innovation Services) gave a presentation entitled “CMUT: a versatile and low cost ultrasonic platform” during the MEMS & Imaging summit Grenoble 24-26 September 2019 [Doc_91]



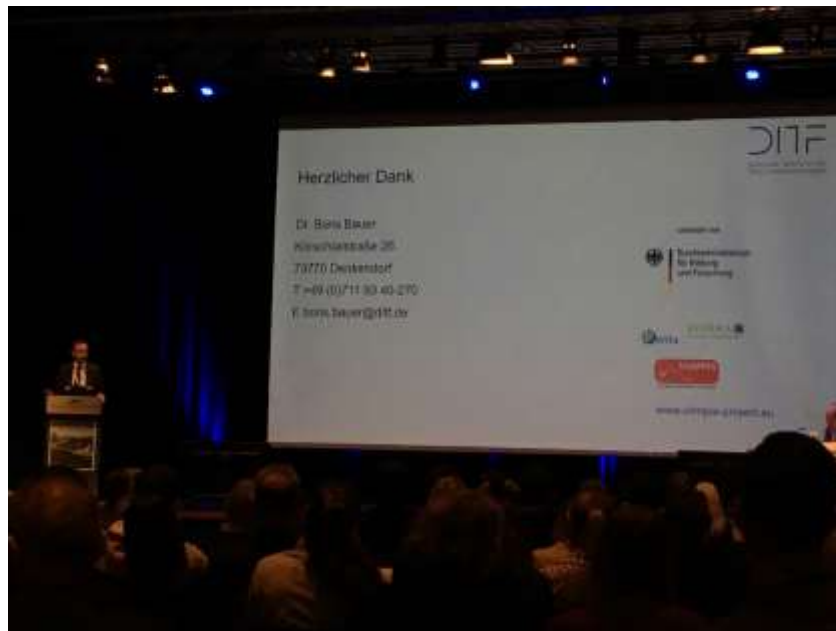
PhD Mingliang Tan (TUDelft) presenting at the ESSCIRC in Krakow Poland October 2019 [Doc_92]



The Health.E lighthouse including results from ULIMPIA was presented during the two-day workshop on Bio Electronics and Wearable Systems organized by the MNBS (DG Connect) the 22nd and 23rd of October 2019 in Brussels [Doc_97]



Hans Hofstraat, vice president and research program manager Royal Philips gave a presentation “Digital healthcare solutions – from big data to clinical impact,” which includes results from the ULIMPIA project at the Medtech & Pharma platform, 24th October 2019. [Doc_99]



Boris Bauer, Götz T. Gresser, „Temperaturregulatorische Individualisierung von Burn Garments,“ 38. Jahrestagung der Deutschsprachigen Arbeitsgemeinschaft für Verbrennungsbehandlung, 15.-18. Januar 2020, Zell am See. [Doc_108]

0.3 Year 3

1. On the 23rd of December 2019 PhD student Shinnosuke Kawasaki from TUDelft gave a presentation about his work in Holland and on ULIMPIA at the Tokyo University. The presentation is available on [YouTube](https://www.youtube.com/watch?time_continue=5&v=1guK1nN-gJk&feature=emb_logo).
https://www.youtube.com/watch?time_continue=5&v=1guK1nN-gJk&feature=emb_logo
2. Riina Ritasalo, Oili Ylivaara, Teuvo Sillanpää, Paula Holmlund, Anu Kärkkäinen Tom Blomberg (Picosun and VTT), “In-vitro Screening of Materials and Laminates by Atomic Layer Deposition for Medical Device Coatings,” ALD2020 Conference, Virtual event, 30 June - 1 July, 2020 Presented by Tom Blomberg (Picosun) <https://ald2020.avs.org/> [Doc_123].
3. Riina Ritasalo et al. (Picosun & VTT), “In-vitro Screening of Materials and Laminates by Atomic Layer Deposition for Medical Device Coatings,” Semicon West 2020 Conference, Virtual event, 20 - 23 July, 2020 Presented by Mikko Matvejeff (Picosun) <https://www.semiconwest.org/node/1> [Doc_128]
4. Health.E lighthouse presentation for the 21th International Conference on Industrial Technology Innovation (ICITI, 2020), Digital Innovation for smart health and wellbeing. In the context of open technology platforms, the presentation references the ULIMPIA project. Date: October 15 (Thursday) 2020 Venue: Taiwan Institute of Economic Research (on-line) [Doc_139]
5. Health.E lighthouse presentation for the MedTech&Pharma Platform Conference. In the context of open technology platforms, the presentation references the ULIMPIA project. 22-23 October (on-line) <https://www.medtech-pharma.com/program> [Doc_140]
- 6.



On the 23rd of December 2019 PhD student Shinnosuke Kawasaki from TUDelft gave a presentation about his work in Holland and on ULIMPIA at the Tokyo University. The presentation is available on [YouTube](#)



1 Press Releases ULIMPIA

1.1 Year 1

1. In May 2018 the Health.E lighthouse was established. It references both the POSITION project (cornerstone) as well as the ULIMPIA project. <https://www.ecsel.eu/health>
2. 31st of July 2018, the ULIMPIA website is on-line: www.ulimpia-project.eu
3. 4th of August 2018, Technical University of Delft published an on-line reference to the ULIMPIA project <http://ei.ewi.tudelft.nl/Research/project.php?id=123&ti=41>
4. Press Release by Penta office announcing the ULIMPIA project “ULIMPIA enables smart body-patches for ultra-sound monitoring at home” 8th of October 2018 [Doc_27]
5. In October 2018 partner Novioscan introduced their first SENS-U product in Germany. This coincided with a trade mission to Rheinland Pfalz en Saarland that was accompanied by King Willem Alexander and Queen Maxima, and ministers Siegfried Kaag en Hugo de Jong [Doc-48].



Screen shot of the ULIMPIA website www.ulimpia-project.eu



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Electronic Instrumentation Laboratory
Department of Microelectronics

TU Delft • Eindhoven • Microelectronics • Research

Ultrasound Integrated Patch for Medical Diagnostics (ULIMPIA)

Themes: [Ultrasound, ASICs & Energy-Efficient Sensors](#)

In this project, we will develop flexible, programmable transducer modules for ultrasound body patches.

Selly years after its first introduction into the professional medical domain, ultrasound diagnostics is now ready to enter the consumer market space. Ultrasound body patches will allow for continuous monitoring of bodily functions, not only on the surface of the skin, but also deep inside the body. Applications include blood pressure measurement, bladder monitoring, blood vessel inspection and wound monitoring. Shifting continuous medical care from the hospital to the home environment will help in reducing the increase of the cost of healthcare. In this project, a European consortium will develop the necessary technological building blocks for ultrasound body patches. Our contribution will be in the development of integration technology and electronics for flexible, programmable ultrasound transducer modules that will be embedded in these patches.

This project is funded by the ULIMPIA. ULIMPIA is a labelled a PENTA project endorsed by EUREKA under PENTA cluster number E19911

For more information, see the [project website](#).

Project data

Researchers: [Norbert Denen](#), [Michael Perle](#), [Mehmet Tay](#)

Starting date: January 2018

Closing date: December 2021

Partners: Philips, Novoscan, Intel Centre, e.o.

Contact: [Michael Perle](#)

[Publication list](#)

Presentation of the ULIMPIA project on the website of the Technical University of Delft.

ULIMPIA enables smart body-patches for ultra-sound monitoring at home

A project within the EUREKA PENTA programme

Paris, November 30, 2018 – ULIMPIA, a project within the EUREKA PENTA cluster managed by AENEAS Industry Association, is breaking new ground in health care by enabling ultra-sound monitoring at home through smart body patches.

The ULIMPIA technology goes beyond existing body patches that measure only parameters on the surface of the skin – temperature and humidity, for instance. ULIMPIA's new MEMS (Micro-electromechanical systems) based technology can look inside the body and continuously monitor and diagnose processes going on under the skin, or even deep within the body, such as blood pressure or bladder function. This will allow many more patients to stay at home instead of requiring hospital-based monitoring, while health services will benefit from reduced costs. In addition, the project's open platform approach will allow application developers to enter this entirely new consumer healthcare market by creating their own applications based on the ULIMPIA technology.

With an ageing population and rising rates of chronic diseases such as cardiac vascular diseases (CVD), obesity, diabetes and chronic obstructive pulmonary disease (COPD), Europe is facing significant increases in healthcare costs – from USD 283 billion in 2008 to an expected USD 423 billion in 2025¹. ULIMPIA aims to provide point-of-care diagnostic solutions that will both reduce the cost of continuous (remote) on-body diagnostics and empower patients to better manage their health at home. The patches will be wirelessly connected to a peripheral device such as a mobile phone, which analyses and displays the data to give real-time feedback to the user. Applications could include blood pressure measurement, bladder monitoring, blood vessel inspection of diabetes patients, early breast cancer detection, needle guidance and wound monitoring.

The ULIMPIA project represents a continuation and consolidation of Europe's strength in ultra-sound diagnostics. A large European consortium consisting of 17 partners in six countries will develop the necessary technological building blocks including: a programmable universal ultra-sound engine, conformable patch technologies (that adapt to the form of the human body) and functional adhesive and bio-compatible materials. By bringing ultra-sound to the consumer market, ULIMPIA is expected to drive high production volumes and fuel further innovation in MEMS ultra-sound technologies to support Europe's existing leading role in professional ultra-sound diagnostics.

¹ Vision 2025 – The Future of Healthcare, Frost & Sullivan, 2016



Figure. Left: CMUT MEMS ultra-sound transducers are made using micro-fabrication. They can be fabricated on top of the ASICs that drive them (middle). Combined with innovations in conformable substrate technology they enable on-body personal ultra-sound diagnostics (photo: Philips, Intel).

About the PENTA programme (managed by the AENEAS Industry Association)

PENTA is a EUREKA cluster whose purpose is to catalyse research, development and innovation in areas of micro and nanoelectronics enabled systems and applications – where there is shared national and industrial interest. Based on the Electronic Components & Systems (ECS) Strategic Research Agenda (SRA) key areas and essential capabilities, PENTA programme contributes to the development of electronic solutions with the opportunity for rapid competitive exploitation and a strong impact on European societal challenges. The PENTA project team is supporting SMEs, large corporations, research organisations and universities by facilitating access to funding, fostering collaborative work and creating consortia.

PENTA is managed by AENEAS, the European industry association.

About PENTA: <http://www.penta-eureka.eu>

About AENEAS: <https://aeneas-europe.org>

About ULIMPIA



Ulimpia is a H2020 project consortium involving 17 partners in six countries. The project partners are: Philips Electronics Netherlands BV (Project leader), Philips Electronics Netherlands BV, TNO, Novoscan, TU Delft, IMEC, Mepps, Fraunhofer EMFT, Karl Otto Braun (KOB) GmbH, Wamos, Henkel, Institute for textile and fiber research denkeford, Institute for textile and fiber research denkeford, NXP Germany, GED-Gesellschaft für Elektronik und Design GmbH, VTI, Picosat, Linxens, Euresat, National funding support is provided by Finland, Germany, the Netherlands and Spain.

About ULIMPIA: <http://ulimpia-project.eu/>

Press release on ULIMPIA by PENTA office the 8th of October 2018 [Doc_27]



In October 2018 partner Novioscan introduced their first SENS-U product in Germany by signing a cooperation agreement with UKS (Universitätsklinikum Saarland) in Homburg. The signing was witnessed by [King Willem Alexander](#) and [Queen Maxima](#), and ministers [Siegfried Kaag](#) en [Hugo de Jong](#) [Doc-48].

1.2 Year 2

1. KOB published a facebook item related to the presentation of ULIMPIA by Marcin Meyer "Smart medical textiles for wireless health monitoring," at the AUTEX 2019, 19th world Textile Conference, Textiles at the Cross roads on 13th June 2019 in Ghent. [Doc_71]
2. KOB has a booth at the 2019 MEDICA 18-21 November. Concurrent with the MEDICA KOB will place a one-page advertisement in the wearable technology magazine that will be distributed there. Additionally, there will be a poster on the back wall of the booth [Doc_88] [Doc_106]
3. Partner Novioscan was proud to announce that they have been acquired by the Swedish Health and Hygiene company Essity for € 6.5M on the 1st April 2020
4. Philips innovation Services dedicated a special LinkedIn post on the ULIMPIA project including the promotional video made by PENTA office: <https://www.linkedin.com/feed/update/urn:li:activity:6651455336551194624/>
5. The promotional ULIMPIA video was posted on the PENTA website: <http://www.penta-eureka.eu/events/videos.php>, 9th of October 2020
6. The ULIMPIA project is an important project of the Health.E lighthouse. Continuous monitoring devices such as being developed in the ULIMPIA project as well as the ULIMPIA project itself are referenced on the Health.E website that went live 1st May 2020 www.health-lighthouse.eu.



KOB has a booth at the 2019 MEDICA 18-21 November. Concurrent with the MEDICA KOB will place a one-page advertisement (left) in the wearable technology magazine that will be distributed there. Additionally, there will be a poster on the back wall of the booth (right) [Doc_88]



KOB booth and presentation of Marcin Meijer at the Medica 2019[Doc_106]



Press release

Stockholm, April 1, 2020

Essity acquires smart ultrasound technology for incontinence care

Hygiene and health company Essity is strengthening its offering in incontinence products through the acquisition of the Dutch company Novioscan. The company develops a wearable ultrasound technology that monitors the bladder and enables continence control. The purchase price is approximately SEK 70m (EUR 6.5m) on a debt-free basis.

The SENS-U innovation is a wearable ultrasound sensor that measures the level in the bladder. It sends a discrete notification that allows the user to empty their bladder in time. A version of SENS-U for children is already available in the market and an adult version is under development.

"The SENS-U technology is an innovative solution that will strengthen Essity's offering in incontinence care and give consumers an opportunity to live a healthier and more active life," says Ulrika Kolsrud, President Health and Medical Solutions of Essity.


Novioscan was founded in 2014 in Nijmegen, the Netherlands, and has ten employees, all of whom will remain in the company.

Essity is the leading global player in incontinence products with the TENA brand. Incontinence affects 4-8% of the world's adult population. Essity works to break barriers and the stigma associated with incontinence to improve well-being and help people live life to the fullest.

Partner Novioscan was proud to announce that they have been acquired by the Swedish Health and Hygiene company Essity for € 6.5M on the 1st April 2020



LinkedIn



Philips Innovation Services

Openbaar profiel weergeven

[+ Volgen](#)

14,108 volgers


Philips Innovation Services
14,108 followers
13 m · Bewerkt

Why our **#CMUT** technology is a game-changer?

We are coordinating the Ulimpia project and develop the open technology platform for the MEMS-based transducers that will be at the heart of the **#ultrasound** engine of the Ulimpia smart body-patch. Working with our technology ecosystem to develop the ultrasound applications of the future!

See how we can support your CMUT challenges here > <https://lnkd.in/gx-t6qF>

#philipsinnovationservices #makinginnovationwork



0:08 / 1:58

12 1 commentaar

Interessant Commentaar Delen

Paul Bekkers Great EU work.
Interessant Beantwoorden

Meld u aan om commentaar te geven

Philips innovation Services dedicated a special LinkedIn post on the ULIMPIA project including the promotional video made by PENTA office:

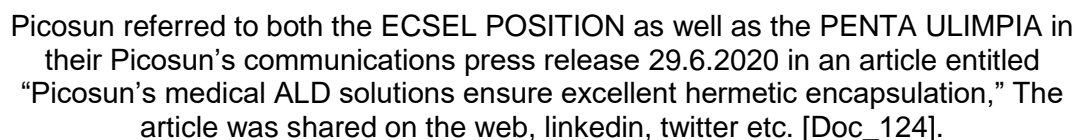
<https://www.linkedin.com/feed/update/urn:li:activity:6651455336551194624/>



Screenshot of the Health.E website that extensively references the ULIMPIA project
www.health-lighthouse.eu

1.3 Year 3

1. Picosun referred to both the ECSEL POSITION as well as the PENTA ULIMPIA in their Picosun's communications press release 29.6.2020 in an article entitled "Picosun's medical ALD solutions ensure excellent hermetic encapsulation," The article was shared on the web, linkedin, twitter etc. [Doc_124].
<https://www.picosun.com/press/picosuns-medical-ald-solutions-ensure-excellent-hermetic-encapsulation/>
2.





2 Workshops ULIMPIA

2.1 Year 1

1. On the 14th and 15th of March 2018 all partners from ULIMPIA gathered at the High Tech Campus in Eindhoven the Netherlands for the official ULIMPIA kick-off [Doc_14]
2. On the 26th of July there was an internal workshop at DITF in Denkendorf, Germany to bring the various departments of DITF up to speed with the ULIMPIA project. Present were the departments: Biomedicine, Knitting- and Fashioning technology, Electronic, Technology integration. [Doc_15]
3. On the 27 & 28th of August 2018 the German partners had a Kick-off meeting which took place at KOB at Wolfstein Germany [Doc_29]
4. On the 15th and 16th of October 2018 partners from ULIMPIA met at Fraunhofer EMFT for a two day workshop to update each other and align activities. [Doc_33]
5. More than 30 people attended the consortium workshop in Delft on the 8th and 9th of Januari 2019. The meeting was organized by the Delft University of Technology [Doc_50]
6. On the 23rd of January 2019 there was a workshop at partner DITF. KOB (Sina Borczyk, Kai Schrovenwever, Marcin Meyer) and DITF (Carsten Linti, Bastian Bäsch, Boris Bauer) were present. The Topic: Design of the temperature-moisture-sensor of Demo 4 (Wound Monitoring)
7. On the 23rd of January 2019 partner GED has visited Philips to discuss the high voltage generation board and to get an introduction into the CMUT demo kit.
8. On the 7th of February partner VTT visited Philips Research for an extensive introduction into the CMUT demo board.
9. On the 21st of March 2019 there was a workshop with partners TUDelft, Philips Research and Philips Innovation Services to come to exchange results from the PENTA ULIMPIA project and the ECSEL JU POSITION project. The result was a decision to work together on certain aspects of ultra-sound front-ends to avoid duplication [Doc_56]



Official group picture taken during the ULIMPIA Kick-off the 14th and 15th March at the High Tech Campus in Eindhoven [Doc_14]



Impressions from the ULIMPIA Kick-off meeting the 14th and 15th of March at the High Tech Campus in Eindhoven [Doc_14]



On the 26th of July there was an internal workshop at partner DITF to bring the various departments up to speed with the content of the ULIMPIA project [Doc_15]



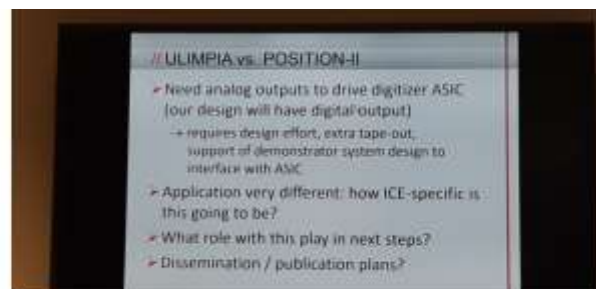
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2.2 Year 2

1. The 22nd of May 2019 there was a workshop at Philips Research to test different adhesive materials for ultra-sound transparency. [Doc_69].
2. More than 20 people attended the consortium workshop Helsinki on the 11^h and 12th of June 2019. The meeting was organized by VTT Finland [Doc_73]
3. On the 16th of July the HELoS project supporting the Health.E lighthouse kicked-off in Delft, the Netherlands. Present were partners: TUDelft, Philips, CEA LETI, Fraunhofer, IMEC, Future, Bayern and Siemens Both the POSITION, as well as the ULIMPIA project were presented as examples of projects working towards open technology platforms [Doc_76]
4. Rob van Schaijk (Philips) gave a presentation “CMUT: a low cost versatile ultrasonic platform,” at a MEMS seminar organized by Salland Engineering, 5th of June 2019, Zwolle, the Netherlands [Doc_81]



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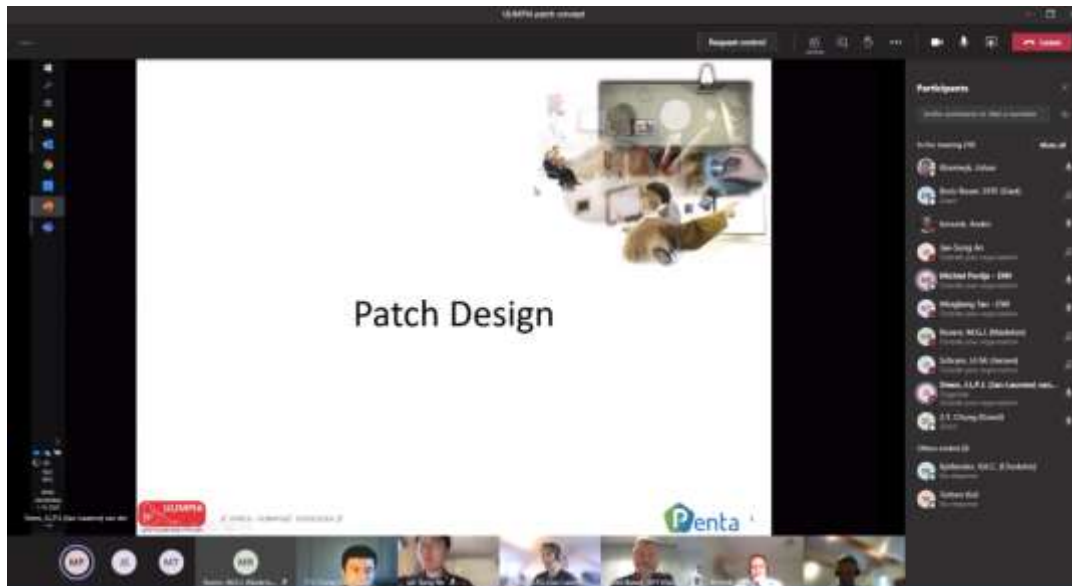
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2.3 Year 3

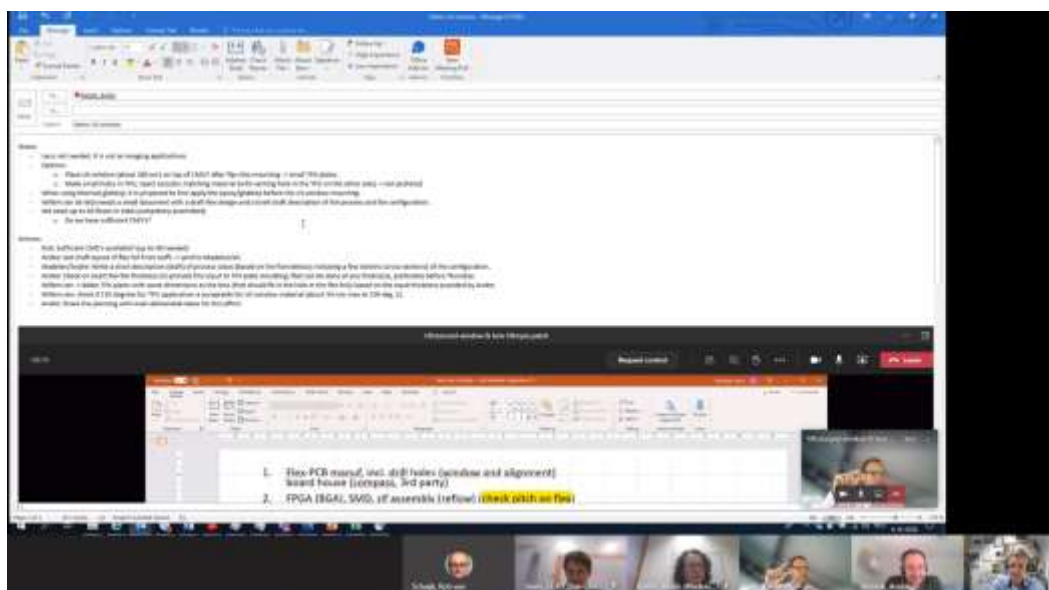
- On the 26th of August 2020 there was the first (online) workshop of the Health.E lighthouse. During the workshop the whitepaper on emerging medical domains was discussed. During the workshop the ULIMPIA project made a project presentation. The workshop was attended by 45 representatives from industry (LE and SME), RTOs, academia, DG RTD and DG CONNECT, and industry associations. [Doc_131]
- On the 30th of September and 1st of October 2020 an additional on-line workshop was organized to discuss topics related to the flex design and the patch integration. Present where partners from DTIF, TNO, TUDelft, and Philips. [Doc_134]
- On the 5th of October 2020 partners from ULIMPIA met again on-line to discuss in detail patch integration issues.



Impressions from the first Health.E lighthouse workshop the 26th of August 2020 [Doc_131]



Impression of an additional workshop organized the 30th of September and 1st of October 2020 to discuss topics related to the flex design and the patch integration. Present where partners from DTIF, TNO, TUDelft, and Philips.



On the 5th of October 2020 partners from ULIMPIA met again on-line to discuss in detail patch integration issues.