

insideAR

The Augmented Reality Magazine

No. 1 | Fall 2012

Scaling the Augmented City

How to get there!

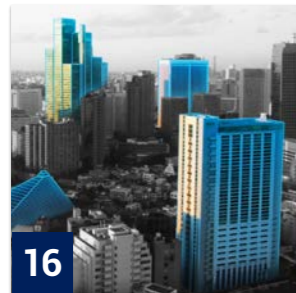
junaio Mobile AR Browser
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AR content in this magazine
wherever you see this symbol





4 insideAR 2012

Welcome to the most exciting event for the Augmented Reality industry. Learn more about everything we have in store for you in our detailed Event Program.



16 Architecture for the Augmented City

Metaio will introduce a scalable, sustainable solution for Augmented Reality production. Learn more in our cover story.



20 Augmenting Reality ~ Enhancing Mobile

Read about the state of the mobile AR industry in this abstract from leading analyst firm Juniper Research.

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Welcome to insideAR 2012

On behalf of the entire metaio team, we are very pleased to welcome you to our annual insideAR Augmented Reality conference. Many first-year or even second-year attendees may not know this, but insideAR had very humble beginnings as a small gathering of computer vision researchers as far back as 2006; we hope you share our enthusiasm that we can now offer an event that caters to all aspects of an industry that grows exponentially every day.



ecosystem, powered by the metaio SDK, it is not hard to imagine a world in which the average mobile user interacts with at least one Augmented Reality app per day.

We have made incredible advances in our own research efforts, having aligned our tracking software with Gravity

and introduced the only commercially available 3-D optical recognition and tracking in the world. And from a paper model to the Marienplatz, we've brought the vision of the Augmented City to reality. For next year, looking to 2014, we intend to deliver Augmented Reality on a global scale to companies, content providers, and of course, the end-user.

Please do not miss the amazing speakers we have brought from all over the world to share their experiences working in the industry; spend some time on the exhibition floor to try out the latest and greatest AR; and take the time to meet the metaio team and all of the remarkable individuals that make this technology possible.

Kindest regards,

-Thomas Alt CEO & Peter Meier CTO
 Co-Founders of metaio

Last year we announced that we would enable AR on every smartphone by 2014. In order to accomplish such a feat, it is imperative that metaio advance and develop a scalable and sustainable solution for Augmented Reality production. In the past, we have prided ourselves on offering development software for multiple, individual solutions. Today we will embark on a single, platform-independent solution that will benefit the entire Augmented Reality ecosystem.

We've brought the vision of an Augmented City to reality

The advent of the mobile device has propelled education, adoption and implementation of Augmented Reality on a massive scale. The success and evolution of this event and the underlying technology over the last 5 years is nearly indisputable proof that the industry is progressing, though no one has to look very far for incredible examples of useful Augmented Reality.

Joining us this year we have the 2013 IKEA Catalogue app, the LEGO Digital Box, the Volvo X-Ray app, the Macy's Holiday and Brasil apps and many more that you will experience during these two days. And with over 900 mobile apps currently in development by our partner and developer

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Augmented Reality



Presentations from Industry Luminaries

This year we've gathered professionals from all over the world to share their experiences and insights on Augmented Reality. These people come from a variety of different sectors that together comprise some of the most incredible examples of Augmented Reality in the world. Take a moment to learn more about these exciting individuals and what brought them here today.



Maria Ekberg Brännström
IKEA

Maria Ekberg Brännström took the challenge two and a half years ago to become Global Catalogue Manager for the IKEA Catalogue. Previously she was leading various positions within IKEA in Sweden and Spain as Sales and Commercial manager. Maria's favorite product within the IKEA catalogue is the Mattress which offers great quality for a very low price.



Fredrik Forsman
Greenelizer

Fredrik Forsman is an industrial designer and concept developer that is currently involved in developing an AR solution for a new green city district in Stockholm. Together with metaio and The Interactive Institute, this project will be the one of the first of its kind using real time data to give citizens online feedback via AR as a method for increasing the awareness on "green behaviors" as well as encouraging these type of actions.



Enrica Filippi
ST-Ericsson

Enrica Filippi is currently the head of Platform Ecosystem at ST-Ericsson, Smartphone and Tablet platform group. Her team is responsible for Android and Windows phone product requirements, software asset innovation, and OS and application partnership management. Enrica Filippi holds a M.S and Ph.D. in Computer Science from Politecnico di Torino (Italy), and is co-author of several papers and patents.



Olav Gjerlufsen
LEGO

Olav Gjerlufsen is currently the Director of Digital Producers at LEGO. Previously, he was in charge of different management positions within the fields of marketing and advertising. Olav has experience in Graphic Platforms, 3D Center, 3D Flow, Digital Activities, etc. He has initiated the development of various digital experiences, including the LEGO Digital Box and other in-store experiences within LEGO.



Kit Hinrichs
Studio Hinrichs

Kit Hinrichs studied at Art Center College of Design in Los Angeles, California and served as principal in several design offices in New York and San Francisco before spending 23 years as a partner of Pentagram, an international design consultancy. In 2009, he opened Studio Hinrichs in San Francisco. His design experience incorporates a wide range of projects, including corporate communications, brand development, environmental graphics, and editorial and exhibition design.



Jürgen Kneidinger
Augmensys

Jürgen Kneidinger started his career in the chemical industry, emerging from maintenance into process automation and finally into software. In the past 12 years he conceived products and held various responsibilities in a rapidly growing industrial software company, which eventually got acquired by a Fortune 500 corporation in late 2008. Leaving his most recent position as Head of Product Management, he co-founded Augmensys in 2011 to bring AR into the process industry.



Larissa Laternser
Ball Packaging

Larissa Laternser studied Media Communications Technology (BEng) in London and New York, and completed her Master of international Business (MIB) at the University of Queensland, Australia. She founded the IT Service company Histream. For Ball Packaging Europe, one of Europe's largest can makers, Larissa has strategically activated Consumer Communications through New Media. She now works as Business Manager Soft Drinks in Zürich, Switzerland.



Dominique Pouliquen
Autodesk

Dominique Pouliquen, is Director and Senior Product Manager for Reality Capture technologies in Autodesk, IPG Division. He is a member of the Reality Capture Group of Autodesk, based in San Francisco, Sophia Antipolis (France), Shanghai and Singapore. Autodesk bought REALVIZ in May 2008, a company that Mr. Pouliquen co-founded in March 1998 from a technology transfer with INRIA (National Research Institute for Computer Sciences and Automatics).



Roberto Mijat
ARM

In the role of Product Manager, responsible for GPU Computing products and technologies such as OpenCL, the efforts of Roberto Mijat have focused on ecosystem enablement of GPU Computing through use-cases, with focus on computational photography, computer vision and augmented reality. Roberto holds a degree in Artificial Intelligence, Natural Language Processing and Virtual Reality, and his research focused on parallelization of multimedia codecs.



Prof. Dr. Werner Schreiber
Volkswagen

Prof. Dr. Werner Schreiber, born 1957, is Head of Research Virtual Technologies at Volkswagen Group. He has a background in Mechanical Engineering with specialization in Production Engineering and Interchangeability. Moreover, Dr. Schreiber is the leader of AVILUS, the world's most ambitious Augmented Reality research project.



Rafael Mroz
ARgeneer

Together with his business partner, Daniel Baar, Rafael Mroz founded ARgeneer in 2010 developing AR Apps for both mobile platforms and events. In his eyes within the next years AR will become one of the most important tools to create new sales opportunities for many industries. He also teaches Online and Mobile Marketing courses at the Western Academy of Communication in Cologne.



Neil Trevett
NVIDIA

Neil Trevett is Vice President of Mobile Content at NVIDIA and President of the Khronos Group. He has spent over twenty-five years in the 3D graphics industry and is responsible at NVIDIA for enabling and encouraging compelling applications on mobile devices and Smartbooks. Neil is currently the elected President of the Khronos Group where he initiated the OpenGL ES and OpenKODE working groups and chairs the OpenCL and EGL working groups.



Christine Perey
Perey Research & Consulting

Christine Perey has worked for more than 20 years in the domain of rich media communications, initially in the area of dynamic media technologies on personal computers. As consultant and analyst, Christine is an active leader of new mobile industry initiatives. For example, since 2009 she has organized and conducted meetings of the advocates for standards in AR around the world in conjunction with major industry conferences.



Prof. Dr. Yongtian Wang
Beijing Inst. of Technology

Receiving his B.Sc. degree in precision instrumentation from Tianjin University, China, in 1982, and his Ph.D. degree in optics from the University of Reading, England, in 1986, Dr. Wang is currently a professor of optics and applied computer science at the Beijing Institute of Technology, and a Yangtze River Scholar appointed by the Chinese Ministry of Education.



Christopher Peterka
gannaca

Christopher Patrick Peterka considers himself to be a global nomad and trend receiver. As a Managing Partner of gannaca think tank on communications located in Cologne he internationally advises corporations, (U)HNWI and (N)GO due to their challenges in communications. In his work, he focuses on global future developments in communications regarding the change in society and economy



Gabriel Weiss
Mitsubishi Electric

At Mitsubishi Electric Cooling & Heating, Gabriel Weiss develops strategies and materials for national and local campaigns in conjunction with its multi-step distribution sales channel. Gabriel's strong interest in interactive marketing and emerging technology led to the development and release of an enterprise-based iPad program with a custom app store system for sales channel members.



Scan this page with junaio to experience Augmented Reality

AR Workshops & Seminars

To sign up for a workshop or seminar, visit the information counter at the registration desk.



For the first time in the history of insideAR, metaio will offer Augmented Reality workshops and seminars for all interested attendees. Held on the second day of the event, these sessions will cover in-depth, hands-on topics in an educational and collaborative atmosphere.

Marketers:

Best-practice use-cases help you learn how to better market and sell your products and services using the power of metaio's Augmented Reality software and solutions. Learn how major brands are informing and influencing purchasing decisions with Augmented Reality.

Mobile AR Developers:

Get started developing and creating your own mobile Augmented Reality apps and experiences. Learn more about AREL, the language that powers metaio's mobile software as well as new features, upgrades and additions to our mobile product portfolio.

Publishers:

Learn how to simplify AR publishing for Print using the metaio Creator. Enhance magazines, newspapers and more and deploy to mobile devices in less than 5 minutes!



Scan this page with junaio to experience Augmented Reality

Experience the AR Live Exhibition



Engineering Solutions:

For AR solutions in manufacturing, industry and more, visit the Engineering Solutions exhibits at all eight Industrial Booth Areas to learn more about how AR can solve problems in industrial fields.

metaio AR Labs:

Discover the technology *behind* the technology in the metaio AR Labs at Booth Area 3. Explore what powers Augmented Reality and how advances in technology continue to improve AR.

The insideAR 2012 Expo offers all-new Augmented Reality experiences from metaio, as well as our partners and developers. Try out the latest apps using the metaio SDK and junaio; experience AR best-practice use-cases from retail, print, digital marketing and automotive industries; and learn what the future holds.

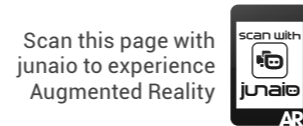
Enter the Augmented City and see live demos and hands-on AR experiences provided by metaio and our network of partners.

Developer Lounge:

Take the opportunity to meet the team from metaio along with our Certified Developer network and try out the latest AR apps and experiences at Booth Area 5.



For a complete map of the AR Live Exhibition, please see pages 12 & 13 of the program.



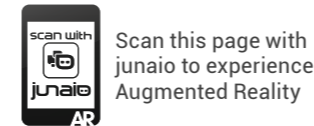
Day 1 - Monday, October 1

Morning - Registration begins at 8:30am

| Time | Speaker | Topic | Company |
|---------------|--|--|-------------|
| 9:30 - 10:20 | Thomas Alt Peter Meier Selim Ben Himane | Globally Scaling the Augmented City | metaio |
| 10:20 - 10:40 | Fredrik Forsman | Creating the Smart and Green City with Augmented Reality | Greenelizer |
| 10:40 - 11:00 | Dominique Pouliquen | Reality Capture | Autodesk |
| 11:00 - 11:30 | Coffee Break | | |
| 11:30 - 11:50 | Neil Trevett | Accelerating Mobile Augmented Reality | NVIDIA |
| 11:50 - 12:30 | Fredrik Forsman, Roberto Mijat, Gabriel Weiss, Enrica Filippi, Larissa Laternser | 2014: The Year of Augmented Reality | Panel |
| 12:30 - 2:30 | Lunch Break | | |

Afternoon

| Time | Speaker | Topic | Company |
|-------------|----------------------------------|---|---------------------------------------|
| 2:30 - 2:50 | Olav Gjerlufsen | The story of Lego's Digital Box. History, Strategy and Outcomes | LEGO |
| 2:50 - 3:10 | Gabriel Weiss | Augmenting Sales and Service to build Brand Preference | Mitsubishi Electric Cooling & Heating |
| 3:10 - 3:30 | Maria Ekberg Brännström | IKEA Augmented Reality Catalogue | IKEA |
| 3:30 - 3:50 | Larissa Laternser | Customization: The Interactive Beverage Can and Enhancing Consumer Engagement | Ball Packaging |
| 3:50 - 4:15 | Coffee Break | | |
| 4:15 - 4:35 | Prof. Dr. Yongtian Wang | Display Systems and Registration Methods for AR Applications | Beijing Institute of Technology |
| 4:35 - 4:55 | Prof. Dr. Werner Schreiber | Mobile Augmented Reality for Customers and Employees at Volkswagen | Volkswagen |
| 4:55 - 5:15 | Kit Hinrichs | Interview with a Renowned Print Designer on his First AR Experience | Studio Hinrichs |
| 5:15 - 8:00 | insideAR Day 1 Post Party | | |



Day 2 - Tuesday, October 2

Morning - Registration begins at 9:00am

| Time | Speaker | Topic | Company |
|---------------|--|---|-----------------------------|
| 8:30 - 9:30 | Press Conference | | |
| 10:00 - 10:30 | Michael Kuhn Tobias Eble Stefan Misslinger | Product Update: Architecture for the Augmented City | metaio |
| 10:30 - 10:50 | Christian Effert | Simplifying Industrial AR Processes | metaio |
| 10:50 - 11:10 | Jürgen Kneidinger | AR in the Process Industry - Progressive Technology in a Conservative Environment | Augmensys |
| 11:10 - 11:40 | Coffee Break | | |
| 11:40 - 12:00 | Christopher Peterka | Smarter Buildings | Gannaca |
| 12:00 - 12:20 | Rafael Mroz | Driving Sales with Interactive AR Apps | ARgeneer |
| 12:10 - 12:30 | Christine Perey | Open and interoperable AR Experiences | Perey Research & Consulting |
| 12:30 - 1:30 | Lunch Break | | |

Afternoon

| Workshop & Topic | 1:00 - 3:00pm |
|--------------------------------------|--|
| Publisher workshop | Simplified Augmented Reality for Publishing using the metaio Creator |
| Sales workshop | How to Market and Sell your Products and Services using the Power of Augmented Reality |
| Developer workshop | Getting Started Creating your Augmented Reality Apps based on metaio AR Technology Solutions |
| 4:00pm - End of insideAR 2012 | |

To sign up for a workshop or seminar, visit the information counter at the registration desk.

For those who do not wish to attend a workshop, please visit the AR Live Exhibition.



Event Sponsors

ARM

www.arm.com


ARM designs the technology that lies at the heart of advanced digital products, from wireless, networking and consumer entertainment solutions to imaging, automotive, security and storage devices. ARM's comprehensive product offering includes RISC microprocessors, graphics processors, video engines, enabling software, cell libraries, embedded memories, high-speed connectivity products, peripherals and development tools. Combined with comprehensive design services, training, support and maintenance, and the company's broad Partner community, they provide a total system solution that offers a fast, reliable path to market for leading electronics companies.

DDID

www.ddid.jp/en


Established on Nov. 4th, 2010 by current CEO Yuichi Saito and Tatsuya Kawamatsu, DDID works within the field of Internet and mobile application development offering marketing, management and business consulting services. DDID is highly focused on promoting strategy planning and management in public relations and advertising. 15 people make up this Japanese company offering big ideas like the well-known CARKCHO service. DDID likes to say that they are creating "another world" thanks to Augmented Reality. Users need only to remove their smartphones from their pockets to enter the "WARLD".

Imagination Technologies

www.imgtec.com

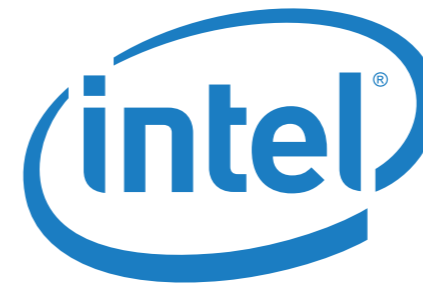

Imagination Technologies is a broad based provider of Silicon IP covering Graphics, Communication, Embedded CPU, Video and Display along with VoLTE and VVoIP solutions as well as Ray Tracing acceleration for professional graphics.

Imagination's PowerVR™ graphics IP consists of the industry's leading graphics accelerators supporting a broad range of applications in mobile, consumer and computing segments. PowerVR enables a powerful and flexible solution for all forms of multimedia processing, including 3D/2D/vector graphics and general purpose processing (GP-GPU) including image processing.

PowerVR's unique tile-based, deferred rendering/shading architecture allows a very small area of a die to deliver higher performance and image quality at lower power consumption than all competing technologies.

All major APIs are supported including OpenGL ES 2.0/1.1, OpenVG 1.1, OpenGL 2.0/3.0 and DirectX9/10/11 and OpenCL.

Intel

www.intel.com


Intel, the world's largest silicon innovator, creates products and technologies that change the way people live, work and play. Whether it is a mobile lifestyle or a new way to enjoy entertainment at home, Intel is helping people all over the world accomplish things they never before dreamed possible. Intel engages with more than 800,000 individual software developers through an online Intel software network (www.intel.com/software) offering design tools, resources and expert consulting.

Intel (NASDAQ: INTC) is a world leader in computing innovation. The company designs and builds the essential technologies that serve as the foundation for the world's computing devices. Additional information about Intel is available at newsroom.intel.com and blogs.intel.com.

Intel is a trademark of Intel Corporation in the United States and other countries.

ST-Ericsson

www.stericsson.com


ST-Ericsson is a world leader in developing and delivering a complete portfolio of innovative mobile platforms and cutting-edge wireless semiconductor solutions across the broad spectrum of mobile technologies. The company is a leading supplier to the top handset manufacturers and generated sales of \$1.7 billion in 2011. ST-Ericsson was established as a 50/50 joint venture by STMicroelectronics (NYSE:STM) and Ericsson (NASDAQ:ERIC) in February 2009, with headquarters in Geneva, Switzerland.

Nettverk GmbH

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Nettverk GmbH is your partner when it's going about special IT solutions. Our range of services comprises network planning, rf planning for wireless networks, complete realization of complex network scenarios including QoS, user differentiation, HotSpot systems, filtering and caching.

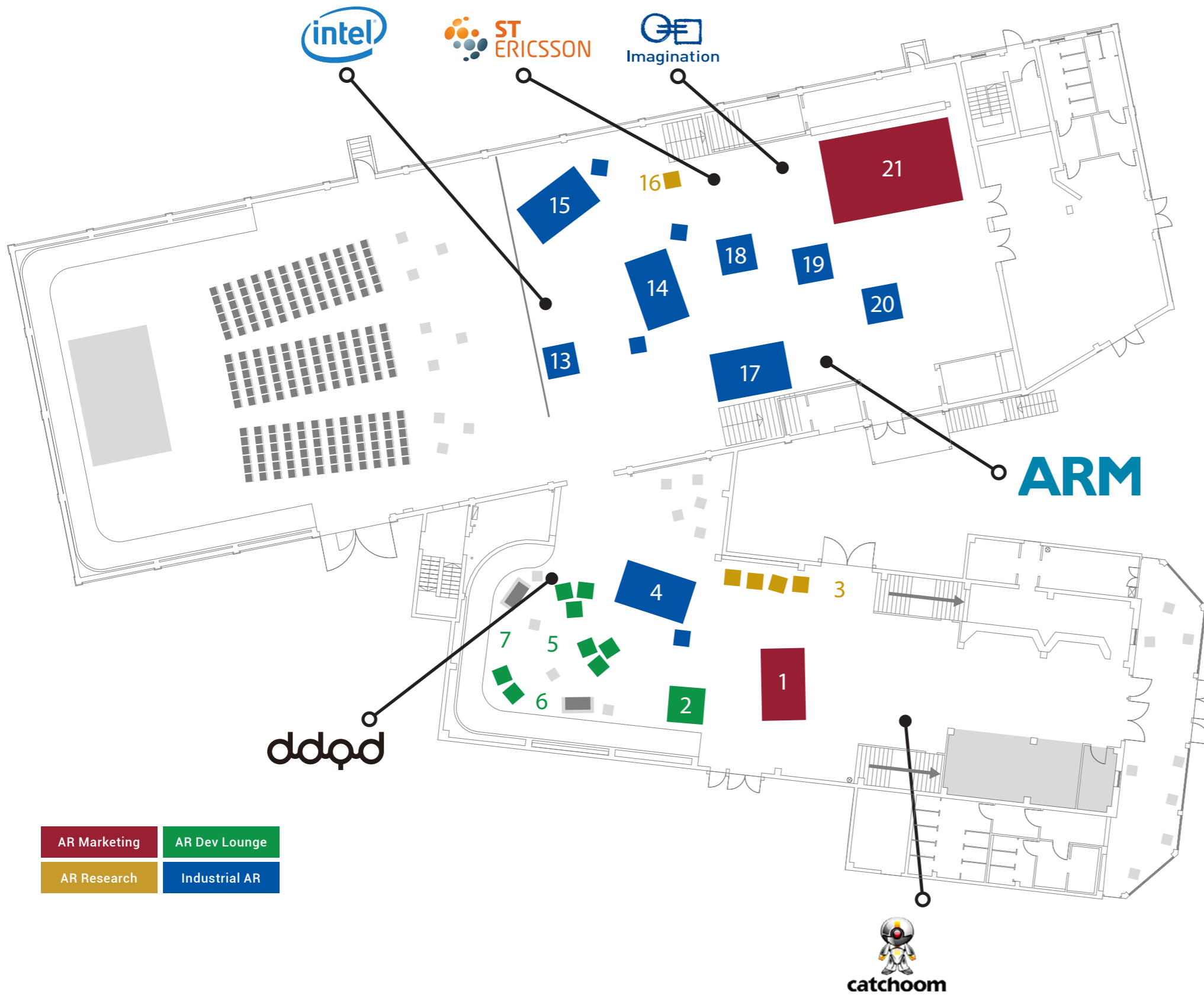
Nettverk GmbH is the one stop business contact for a successful and hassle-free network experience, fixed or wireless! We optimize the IT network for your demonstration scenarios as well as for your customers' satisfaction.

Events, fairs, special locations - Nettverk GmbH provides you with an outstanding, reliable and cost-optimized IT service.

Media Sponsors



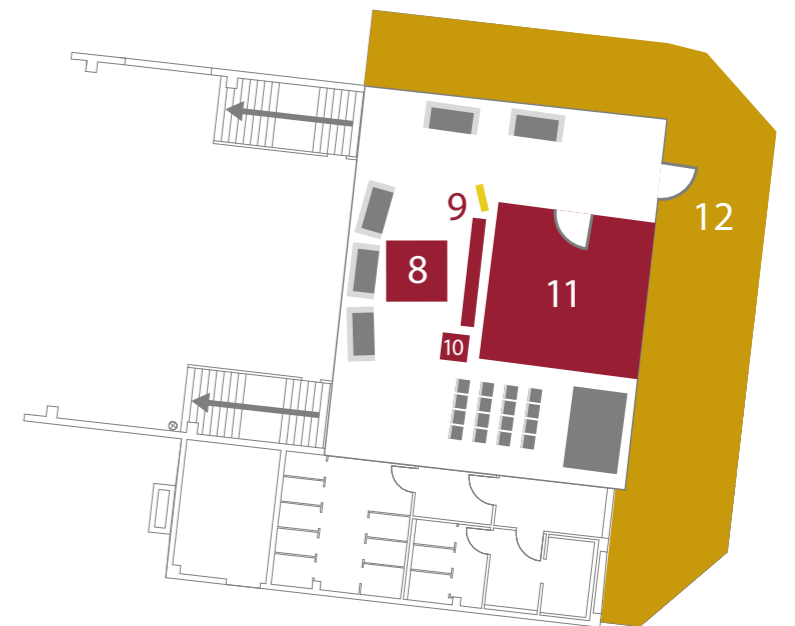


| | |
|--------------|---------------|
| AR Marketing | AR Dev Lounge |
| AR Research | Industrial AR |

insideAR Live Expo

1. Easy AR Publishing. The All New metaio Creator 2.0
2. The AR Greenroom
3. metaio AR Labs
4. Volkswagen AR Maintenance Demonstration on iPad
5. Developer Lounge
6. Live-experience: The Mitsubishi meVIEW AR Sales Tool
7. Live-experience: Macy's Believe-O-Magic
8. AR Magazines and Catalogs
9. The LEGO DIGITAL BOX
10. Ravensburger Augmented Reality Puzzles
11. Experience the Zee Fear Files
12. Augmented City 3D Outdoor Experience
13. Large Area Indoor Wifi Tracking by Augmensys
14. AR Window-to-the-World with ART and metaio Engineer 5.0
15. Audi A1 eKurzinfor: The AR Manual for your Car
16. Venturi Research Project
17. AR Measurement and Engineering with FARO and Hexagon
18. Augmented Reality for Construction and Building Sites
19. Projective AR by Extend3D
20. High Quality AR Rendering by RTT
21. Augmented Reality Ghost Hunter



FierceWireless Names metaio as one of Its "Fierce 15" Wireless Companies of 2012

San Francisco, CA - June 20, 2012 - metaio announced today that it has been named to the annual FierceWireless "Fierce 15" list, designating it as one of the top privately held wireless companies of the year. FierceWireless editors evaluated hundreds of organizations, and found Metaio to be one of the "fiercest," proven by their creativity and innovations in the marketplace.

metaio recognized for leading the way in mobile AR

FierceWireless, an internationally recognized daily email newsletter reaching more than 80,000 senior wireless industry executives, provides executives in over 100 countries with a quick, authoritative briefing on the day's top wireless stories, including new trends and technologies.

"metaio's augmented reality SDK is geared toward helping developers, publishers and brands integrate AR into their apps and is a key step in making AR a commercial success," said Sue Marek, Editor-in-Chief of FierceWireless.

metaio has proven itself numerous times as the leader in mobile and wireless augmented reality technology. In addition to providing a no-charge mobile SDK for iOS and Android, metaio produces a free mobile app called junaio, which serves as an AR entry point for users and developers alike.

"We are thrilled to be recognized by FierceWireless, the industry's must-read news leader," said Trak Lord, head of US Marketing & Media Relations for metaio. "The wireless community depends on FierceWireless to provide the most up-to-date news along with analysis of major industry trends. It is an honor to be recognized by such a well-regarded news outlet."

The FierceWireless "Fierce 15" celebrates the spirit of being "fierce" - championing innovation and creativity, even in the face of intense competition. The complete list of winning companies is available on the FierceWireless Web site at <http://www.fiercewireless.com>.

FierceWireless is where industry insiders turn to find out what's shaping the wireless landscape. Receive your free subscription today at <http://FierceWireless.com/insideAR>



IKEA 2013 Catalog Ships with Augmented Reality



Everyone's talking about the new 2013 IKEA Catalog featuring image recognition and Augmented Reality for the first time ever. With a 211 million-strong

subscription base, we're pretty excited about it too! We wanted to thank McCann -Erickson for mentioning our part in the creation of the app, which was developed using metaio's powerful mobile software, available for free download on our website.

iOS and Android users can download the IKEA Catalogue app for free to discover all 43 pieces of augmented and activated content when the Catalogue arrives in the mail and at IKEA stores around the world.

ISMAR 2012



November 5-8, 2012 • Atlanta, GA, USA

ISMAR is the ultimate international conference covering the latest updates from the field of science, technology and new generation innovations like Mixed and Augmented Reality. This year the conference will take place at the Georgia Institute of Technology in Atlanta and will feature the latest research in the areas of Augmented and Mixed Reality. ISMAR brings together technologists, educators, scientists and developers from all over the world to explore fascinating new types of user interfaces, technologies and concepts.

Mobile World Congress 2013



February 25-28, 2013 • Barcelona, Spain

The Mobile World Congress (MWC) is one of the most important events for the international mobile business community, and takes place in the "Mobile World Capital" of Barcelona, Spain.

Don't miss the opportunity to witness the professional mobile ecosystem's continued expansion and growth with metaio. We will continue to collaborate with the major mobile platforms in an effort to achieve Augmented Reality software optimized at the chipset level.

Other events where metaio will take part

TOC Conference

October 9, 2012

Frankfurter Buchmesse

October 10-14, 2012

The Augmented Planet Event

October 30-31, 2012

Infotag E-Medien

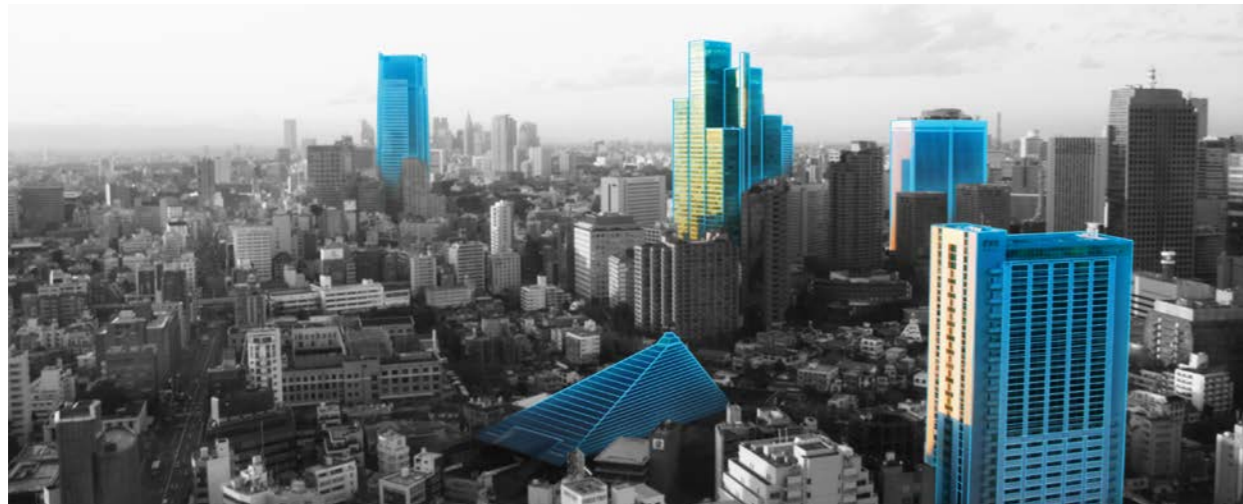
November 8, 2012

W&V-Kongress "The Power of Print"

November 21, 2012



Architecture for the Augmented City



Since 2003, metaio has dedicated significant resources to developing and advancing our computer vision technology and software for the benefit of our partners, clients, developers and, of course, the end-user. As hardware has made radical advances over the years, we have striven to keep pace, constantly updating and upgrading our products to match the demands and needs of a growing technological society.

In order to enable AR on every smartphone by 2014, it is imperative that we introduce scalable production methods into the AR ecosystem. In doing so, we will provide our clients, partners, developers and end-users a more sustainable foundation for the next generation of AR experiences.

At this year's insideAR, metaio will make one of its most important announcements concerning the technological roadmap and the future of augmented reality usability and production. For the past few years, we have prided ourselves on being the only AR company providing individual solutions for mobile, web, offline, industrial, desktop publishing and cloud-based delivery, all of which is powered by our underlying core technology and research and run in tandem with our hardware optimization efforts. But the technology landscape is changing, and we believe it demands an overall platform-independent approach in order to best suit interoperability, maintenance and the overall user experience. That is why we are announcing our intentions to release a software development kit that will unify and streamline development and production for the entire augmented reality ecosystem.

We are happy to announce that the new metaio SDK, the metaio Creator, and our cloud-based mobile app junaio will all share a common, unified code base that brings with it the latest advances from our core research and development. This will effectively allow for the most streamlined production of augmented reality experiences, ever – and will help to realize the vision of the Augmented City.

More than ever, we are providing the major building blocks for creating sustainable, scalable AR experiences.

This single, platform-independent product will combine low-level hardware optimizations, new and improved tracking algorithms and better content authoring pipelines – all enabled by metaio's Augmented Reality Experience Language (AREL).

More than ever, we are providing the major building blocks for creating sustainable, scalable Augmented Reality experiences.

Award Winning Research & Development



Since receiving the prestigious ISMAR Best Tracking award, the metaio R&D team has been working every day to ensure we are offering the best augmented reality software possible. In order to accomplish this, we have devised and implemented new algorithms and camera technologies to enable AR nearly everywhere and on nearly anything.

With metaio's recent research efforts, no images or markers are necessary - just reality itself.

The ability to recognize images, markers and objects is one of the most important aspects of augmented reality, and metaio has been researching how to make recognition and visual search more intuitive, natural and accessible. As a result, we will be introducing continuous visual search for use in mobile AR experiences. No more "scanning" – users will need only to view a given image or object and the experience will begin automatically.

Last year we announced the first commercially available 3-D tracking technology to recognize and overlay digital information on real-world objects using point clouds. In addition to making substantial improvements in our point cloud technology, we have been optimizing our software for Simultaneous Learning and Mapping (SLAM) algorithms, enabling the deployment of AR experience

in almost any real-world environment. No images or markers necessary – just reality itself.

All of the commercial technology we provide runs on the success of our core research and development. We integrate these latest advances directly into our newly-refined product structure so that partners, developers and users will equally benefit from our efforts.

The New metaio SDK



The core technologies for the PC, Mobile, and Web SDK have been combined based on the integration of AREL, which will enable you to do something never before seen in the AR industry: create a single AR experience and run it on iOS, Android, and PC. Whether it's through the junaio architecture or your own native app, the metaio SDK will enable multiple-platform publishing with the same set of APIs and functionalities.

To learn more about the new and improved metaio SDK, please visit Booth Areas 5 and 6 and see some of the amazing mobile use cases we've already accomplished.

metaio SDK Features

- Improved performance of 3D object tracking and teaching
- Optimized client-based visual search for large number of 2D targets
- Sensor fusion for visual-based tracking
- Continuous visual search & SLAM integration
- Improved stability, robustness and performance of ID Marker and 2D marker-less tracking



junaio 4.5

Junaio, the free mobile augmented reality browser application for Android and iOS, is built on the same core technologies as the new metaio SDK, and delivers mobile augmented reality to the user right through the cloud, with content populated by an international network of developers. The last major release, 4.0, saw the first ever integration of AREL and a radically new user interface and experience.

To learn more about the latest update to junaio, please visit our Developer Lounge at Booth Area 5 to get a hands-on experience.

junaio 4.5 Features

- Brand-new Point of Interest (POI) visualization for location-based content
- Improved 2-D and 3-D tracking
- SLAM integration
- Direct access and sharing through Facebook
- Continuous visual search integration

metaio Creator 2.0

The new metaio Creator redefines AR authoring for the print and publishing domain. The completely redesigned user interface allows for a fast and very easy to use creation of AR experiences for publishing use cases in the day-to-day business. Originally a desktop publishing tool for junaio, the metaio Creator will be compatible with the new, unified metaio SDK. Powered by AREL and with a brand-new user interface, the metaio Creator will continue

to enable the authoring and deployment of AR scenarios without any programming necessary.

To learn more about the brand-new metaio Creator, please visit Booth Area 1 to get a guided walkthrough.



metaio Creator 2.0 Features

- Majorly improved tracking and detection for automatically optimizing pages and images
- Integrated magazine manager
- Integrated tracking and analytics manager
- Improved performance and usability

metaio Engineer 5.0

Specialized, industrial applications of augmented reality have always been a priority for metaio. We have a valued portfolio of industrial clients that require power, precision and accuracy in augmented reality planning, prototyping and maintenance. As a result the metaio Engineer will remain a vertical solution separate from the new metaio SDK, though we will continue to improve and update the software as we have with this most recent 5.0 release.

To learn more about the metaio Engineer 5.0, make sure to visit the amazing engineering demonstrations on the exhibition floor at Booth Areas 11-19

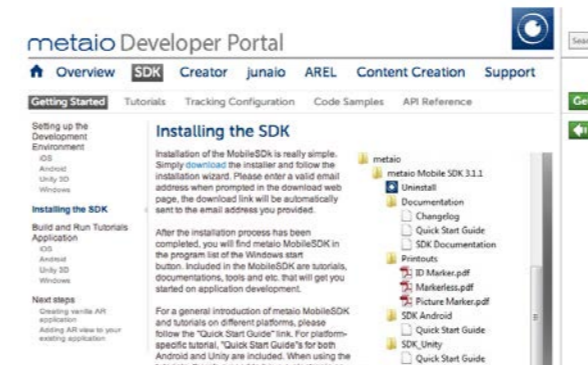
metaio Engineer 5.0 Features

- Integrated high-precision camera calibration
- More efficient high-precision off-set calibration
- Improved alignment without need of external measuring tool



Scan this page with junaio to experience Augmented Reality

The metaio Developer Portal



With the major changes and reorganizations we've made to our product line, it was necessary that metaio also redesign the developer and online community experience for its products. The new site provides a one-stop hub for developer resources, licensing queries, and frequently asked questions regarding all of the new changes and products.

Be sure to try out the new developer portal today, at <http://dev.metaio.com>

dev.metaio.com Features

- Completely restructured and redesigned product documentation
- Extensive, guided tutorials
- How-to's, FAQ's
- Updated helpdesk interface

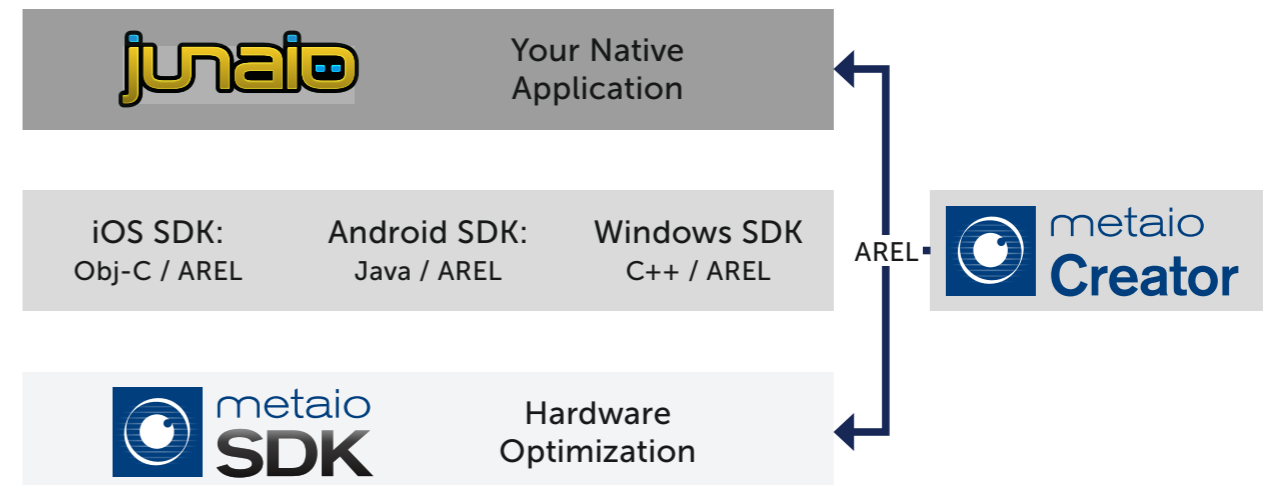
metaio ToolBox

In order to facilitate augmented reality on real-world objects and environments, metaio will release a free Android and iOS application for developers that will enable the creation of point cloud and SLAM tracking configurations.

Learn more about the metaio Toolbox in the brand new developer portal at <http://dev.metaio.com>

metaio Toolbox Features

- Create robust point clouds of nearly any 3-D object
- Create SLAM reality maps of nearly any environment
- Export created assets to the metaio Creator and the metaio SDK for use in scenarios



Mobile Augmented Reality: Entertainment, LBS & Retail Strategies 2012-2017

- AR Business Model Evolution
- Industry Leading Forecast Suite
- The Future of Mobile AR

The highly anticipated 3rd edition of this industry-leading report provides an analysis of the still embryonic mobile augmented reality industry, highlighting the key opportunities for growth and examining the increasing specialisation of key players in the market.



→ insideAR attendees can receive a 10% discount on the Augmented Reality report using the code InsideAR10. This discount code expires on November 5, 2012.

The Report Covers:

Finding the Niche. The report assesses how the mobile augmented reality industry has evolved over the past 18 months as players look to specialise and strengthen their business models. The report provides detailed case studies of how key players have developed their business strategies and examines the opportunities available across a number of segments.

Consumer Awareness. Raising consumer awareness is key to the success of the mobile augmented reality industry. This report examines ways that consumers can be educated in what mobile augmented reality can do for them.

Features of the Report:

Expert Industry Opinion – The report features interviews with players from across the value chain, including interviews with CEOs and Founders. Readers will gain specialist insight into the trends, drivers and opportunities in a number of mobile augmented reality segments.

Barriers to Success – Readers will gain valuable insight into the social, legal and technological barriers facing those looking to deploy a mobile augmented reality product. The report analyses the hurdles to revenue generation and provides a comprehensive set of strategic recommendations for players looking to overcome these hurdles.

Expansive Forecasts – Forecasts are split by 6 AR app categories: Location-Based, Social Networking, Games, Lifestyle & Healthcare, Multimedia & Entertainment and Enterprise. These are the most comprehensive forecasts currently available in the market and examine revenue streams from three different business models: download revenues, revenues from purchases post-download and advertising revenues.

Additional Excel Dataset:

With over 200 additional tables, containing more than 20,000 additional data points, the 'Mobile Augmented Reality Excel 2012-2017' accompanying the report provides the full forecast methodology data and includes country-level forecasts for the US, Canada and the UK.

Juniper Research Limited

Juniper Research specialises in providing high quality analytical research reports and consultancy services to the telecoms industry. They have particular expertise in the mobile, wireless, broadband and IP convergence sectors. Juniper is independent, unbiased, and able to draw from experienced senior managers with proven track records.



Scan this page with junaio to experience Augmented Reality

LEGO Digital Box



The LEGO "DIGITAL BOX" Augmented Reality kiosk was developed by LEGO Digital Systems and metaio. After an initial evaluation phase it was rolled out to LEGO brand stores worldwide. The application was prepared so that content updates

can be performed easily without having to install a new version of the software. Furthermore, statistical evaluation has shown a positive impact on the consumer experience and other targets of LEGO in regards to the DIGITAL BOX

LEGO Norway 50 years on junaio



LEGO Norway created a junaio channel as part of their 50-year campaign. For an out of home campaign three huge billboard designs were created which allow users to explore Norway's beautiful landscape and discover cool LEGO animations hidden in the images.

Scan the QR code at left with junaio to experience the channel for yourself.

Scan these pages with junaio to experience Augmented Reality



Sherwood Rise on junaio

Developed by: Dave Miller



THE TRUTH

Day Three 2012 | Issue 3 of a bright new experience | Max 35C, min 30C. Always sunny?

HEIST!



Dramatic scenes - Sir Gisbourne's London home attacked and robbed. Lord Chancellor shot.

Chancellor's close friend tragically run over and killed by getaway car. Large sum of money - estimated in the millions - was stolen from the house during the raid.

The Merry Men so-called 'terror group' are prime suspects and wanted for murder.

CCTV viewed by millions could be genuine

Steve Dumbleton, City Editor

Science fiction appeared to become reality yesterday, when Sir Gisbourne's house CCTV was streamed on TV, for the world to see, and the "heist" watched live. Millions of people saw the Chancellor shouting "Give me the bag!" as he repeatedly lunged for the bags of money.

At one stage, one of the hooded figures hits him in the face with the barrel of a gun, and we hear him sobbing.



Gisbourne home: state of the art CCTV

The CCTV footage could prove to be a fake, though on early analysis it does appear that the Merry Men were behind this. The heist could have been a staged event calculated to expose the Chancellor, which is one of the main aims in the Merry Men manifesto, dedicated to exposing corruption within government and the financial industry. In fact there have been many allegations of money changing hands between Sir Gisbourne and the Chancellor, and in this context the actions of the Merry Men would seem understandable.

However, the authenticity of the CCTV footage is being disputed. The Police have yet to release an official statement, though some experts are questioning if it would even be technically possible to connect CCTV to a TV network, and there are rumours that this could be an inside job, and possibly one of Gisbourne's many servants could be implicated.

Scan me!



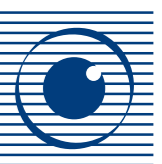
Standoff at Sherwood Rise gets violent



The stand-off continues at Sherwood Rise, where the Police are trying to apprehend the suspects, the members of the "Merry Men" hacker group. The group, according to eye witnesses, include three men and a young woman, who fled the scene, being chased by the Police. They have been cornered at a large housing estate in south London called Sherwood Rise.

The hacker group seem to have considerable public support, and residents of the estate have been filling the street and obstructing the Police in their work. A worrying standoff is emerging, which may require force and possibly lead to military intervention. In a last minute development, large crowds are gathering outside Parliament, in solidarity with the Merry Men.

"Sherwood Rise" is an exciting transmedia story told as a series of newspaper editions, websites and emails, over a period of 4 days. Here you can find day 3 of the newspaper. Interactive AR, using the advanced features of junaio GLUE and AREL, changes the user's path through the story. This is a research project by the University of Bedfordshire (RIMAD), for the UNESCO "Crossing Media Boundaries" initiative.



insideAR

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