Chapter 1 : Innovations on the home-front: the smart home and beyondâ€¦.

The Nightingale Smart Home Sleep System Dual Twin helps you achieve deep, refreshing sleep. The system blankets your bedroom in soothing sounds with a proprietary sound curve, called sound blankets, optimized for each user's room acoustics.

By Special Guest Christy Matte , Special Correspondent September 18, Smart home technology is on the rise, both in terms of product availability and popularity. But, much like other new tech developments, many people perceive it as a frivolous add-on or a luxury option. In truth, smart home tech offers quite a few benefits, even beyond saving money. Caregiving and Independence For those who have children, aging parents, or disabled family members in their care, smart home technology can provide peace of mind. You can check in on kids who are home alone, an ill relative, or a grandparent with mobility issues. Smart medical devices â€" There are a wide range of connected sensors and devices on the market that help monitor health and healthy behaviors. Options like beds and other furniture, socks and shoes, and heart and blood monitors, can be equipped with sensors to track changes in gait, vitals, sleep patterns, and more, and report them to medical professionals or family. They can also trigger alerts of possibly significant health changes. Safety and Security Keeping family and property safe is always a priority. Smart homes shine in this area by alerting you to problems before they become disasters. It can send an email or text message so you can quickly contact a plumber or other contractor to minimize damage. Air quality sensors â€" Air quality sensors monitor various factors in the air to help keep you and your family healthy. They might warn you of unhealthy conditions or trigger actions such as turning on an air purifier or the ventilation system. Smart security systems â€" From connected cameras to WiFi video doorbells, smart security systems not only have remote alerting capabilities, they can trigger other actions as well. They might turn on the outside lights or sprinkler, or turn on a smart speaker so it sounds like someone is home. This allows you to monitor your property and control your smart devices on vacation, from work, or wherever else you need to be. Once their work is done, you can delete the codes. Smart locks are also great for families with the ability to send alerts to mom and dad when the kids unlock the door after school. Smart outlets and appliances â€" Beyond the ability to preheat your oven while you make your way home from work, smart appliances add additional value. You can turn off a forgotten iron or lamp rather than having to hurry home mid-day. The best part is that they can all work together through a convenient smart home hub that can be easily set up through internet service provider.

Chapter 2 : Smart Home Automation Integrators For The Washington Area

The thought behind this publication is to continue to develop an active research community dedicated to explore how Smart Homes and Health Telematics can foster independent living and offer an enhanced quality of life for ageing and disabled people.

To react to the needs of this cohort to provide an environment within which they can reside for as long as possible, whilst maintaining their quality of life and independence, is a widespread concern for all. As such, there is real benefit to further investigate the role of technologies to address these changes and subsequently offer practical solutions to support independent living. We feel that within the realms of Smart Homes and Health Telematics real, affordable and useful services can be developed which will have the necessary underlying technological and service delivery infrastructures to allow seamless integration into existing care delivery paradigms. ICOST focused on usability. The introduction of technology can provide a positive impact, however, it is necessary to avoid any detrimental effects if reliance upon technology within the home environment becomes so great that people will not leave their own home in fear of losing the support once outside of the home, or its close proximity. ICOST focuses on promoting personal autonomy and extending the quality of life by considering including smart services inside and outside of the home. Specifically, those participating were encouraged to consider topics addressing inclusive smart home services, situation awareness, location-based services and mobility of service delivery. These are then followed by 36 research papers to be delivered as oral presentations and a further 15 short papers to be delivered as poster presentations. The proceedings has been divided into 6 Chapters in an attempt to broadly categorise the wide spectrum of topics covered. Firstly, Chapter 1 focuses on Humanâ€"Computer Interaction and provides an insight into the latest developments of how systems can interact with and for people. Chapter 2 addresses a core topic for this event: Smart Homes and Healthcare. Papers in this Chapter report on the importance of technology as a healthcare facilitator and on the innovative ways that Smart Homes can be used to provide healthcare services. Context Awareness and Activity Monitoring is the theme for Chapter 3. This Chapter provides contributions which offer solutions to the problems of context characterization and activity identification, all distinctive behavioural features that Smart Home related systems are expected to exhibit. Chapter 4 details technological advances in the area of Sensors, Wearable Systems, Smart Devices and Robotics, all of which allow the environment to collect ambient information. This technology is fundamental to transform an environment into an active space that can be sensitive to situations of interest and to react sensibly when required. Next, Chapter 5 provides us with an insight into the recent developments in Smart Homes and Health Telematics relating to the core areas of Communications, Middleware and Privacy. Finally, Chapter 6 presents a series of short papers addressing a range of the aforementioned topics covered in Chapters 1â€"5. We would like to take this opportunity to thank a number of people who have helped in making this conference a success. First of all we would wish to thank all of the authors for their excellent contributions. We would wish to thank the Scientific and Technical Committees for their support during the review process. In addition we would wish to thank the members of the Local Organising Committee for all of their efforts in the organising of the conference itself. In particular we would wish to recognise the efforts of Liam Burns and Steven Devlin who managed the conference website and also assisted with the production of the proceedings. We would like to express our gratitude for the following organisations who very kindly sponsored the event: Finally we wish to express our thanks to Prof. Zenn Bien and Prof. The ICOST community, although only in its fourth year of existence, is making substantial progress and indeed an impact for its end users. We hope that ICOST will further extend these developments and create a forum whereby further needs and challenges can be openly discussed and addressed on an International and multidisciplinary level.

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Pans, scales, and crock pots Standards of wireless communication Smart home automation solutions rely on different standards for wireless communication. Each of these options bring different possibilities and fulfil different purposes. However, they are also developing, meaning what was once true may not be true now or in the future. ZigBee has been particularly useful in smart home automation. WiFi, however, does not offer a mesh system and is known for consuming far more energy than its competitors. Bluetooth SIG, the group behind the standard, is aiming to make Bluetooth the center of numerous future solutions, and by adding Mesh Bluetooth is now a much stronger long-term competitor. No need to invest in several different kinds of tools, standards, and methods. This could propel Bluetooth into the center of consumer wireless communicationsâ€"smart home included. However, there are two basic ways to power smart home and home automation solutions. You purchase lights or a microwave you know will be controlled via app. The second option is to add sensors to an existing house. Sensors and smart outlets give the smart home results without pricey dedicated gadgets. For solutions like automated entry access and digitalized security, this is a quick fix. You have a digital thermostat. So how does that equate to better temperature in your home? Using conditional statements, you can create just about anything. If you receive a text, your lights turn blue. If you exit a room, the lights turn off. End-user smart home owners will likely not see the technical side of this equation, but it will become ingrained as a method of automating processes. Perhaps most exciting about this is the ability for users to create their own custom scenarios. You can even create your own applet on ifttt. Instead of being locked in to just a handful of options, seemingly endless customizable pairings will make the smart home endlessly useful. Smart home automation in and beyond On top of existing solutions getting smarter and more affordable, we can also expect new solutions. The real problems are much more nuanced. What do home owners really want? Accompanied by a CAGR of Telling a voice assistant to play your favorite podcast or turn on the lights still sounds vaguely gimmicky. As these solutions grow, so will the importance of a strong, reliable standard like Bluetooth at its core. Hannah Augur Published on:

Chapter 4 : What the smart home will look like in , and beyond

When it comes to the smart home, the most radical shift could be how and where we make our homes. Ideas include sustainable, sensor driven homes with smart solar panels, wind turbines and piezo plates built in to buildings and connected to our individual apps.

Email The smart home market is important for a couple of reasons. The most obvious is the value of the sector: Linking home health, office, entertainment, environment and appliances in an intelligent network will be a money machine. Perhaps even more importantly, smart homes and smart cities undoubtedly seek to use standards and technology that are related. Thus, companies that control the home have a leg up on towns and cities, which represent an even bigger prize. The two should be thought of as separate but related endeavors. It, therefore, makes sense that companies are trying to move into your home. Microsoft, which of course already is in most homes, is seen as a beneficiary of an agreement between the Open Connectivity Foundation OCF and the Thread Group that is designed to simplify the interconnection of smart home and Internet of Things IoT devices. The integration will ultimately bring the Thread Group protocols and network transports to Windows There is a lot of money on the table and a lot of powerful companies, in addition to Microsoft, vying for it. ReadWrite points out that OFC and Thread work at different levels of the stack necessary for smart home networks. Companies in both groups include Samsung and Qualcomm. Home networking is a complex area because there are so many companies and unique agendas. It will be a long time before winners and losers emerge. Some companies therefore are hedging their bets. The IoT and smart home technology are deeply related. It will be hard to realize the full vision of the smart home without the IoT. The IoT, in turn, will not reach its full potential without a significant presence in the home. They are, however, different. The ways in which consortia and the companies that comprise them create seamless interoperability will go a long way toward determining the winners, both in the home and the towns and cities outside the front door. He also covers net neutrality and related regulatory issues. Weinschenk has written about the phone companies, cable operators and related companies for decades and is senior editor of Broadband Technology Report. He can be reached at cweinsch optonline.

Chapter 5 : Beyond Novelty: Smart Homes for Safety, Security, and Personal Well-Being

Smart home technology is on the rise, both in terms of product availability and popularity. But, much like other new tech developments, many people perceive it as a frivolous add-on or a luxury option. In truth, smart home tech offers quite a few benefits, even beyond saving money. For those who.

With the arrival of the Google Home and Amazon Echo to the Australian market through to the rapid adoption rate of other smart products, virtual assistants have now moved out of our mobile phones and into our homes and smart home technology has finally broken through to the mainstream. With smart homes dominating the Consumer Electronics Show in Las Vegas last month, the smart home has now gone from gimmick to intrinsic. In fact, smart home penetration in Australia is now at Leading tech companies like LG, Samsung and Panasonic all revealed plans to add AI to a host of devices this year â€" from washing machines to cars to cooktops â€" to let them anticipate your needs. Now the smart kitchen is changing the game. In the future, through AI technology, your smart home might even be able to monitor your behaviour, learn your habits and pre-empt your needs â€" without even having to ask. Integration will make or break smart home devices The growth of integration into the house will be one of the biggest tech trends in Australia this year. One of the main appeals of the smart home is the convenience it provides homeowners. Technology is set to become much more efficient in and beyond with increased convenience, control and customisation a main priority for Australian homeowners. Smart homes filled with these connected products are loaded with possibilities to make our lives easier, more convenient and more comfortable. But rather than turn the air conditioner on when you get home and wait for your house to cool, you simply use your smartphone when you leave your officer to tell your smart air conditioner to turn on. More internet-connected appliances than ever before Australian homes are finally embracing the Internet of Things IoT. The IoT refers to the connection of the internet to everyday devices, which means you can control your devices from a smartphone or remotely. Now, on average, Australian households have 21 internet-connected devices with a predicted 29 by This explosive growth is mainly due to internet connectivity and will play a large part in the future of the smart home. Australia is on the verge of an era in which just about every electronic device will be connected to each other and the internet. The IoT home market is set to skyrocket as internet connectivity is built into many existing products and services. A stronger focus on surveillance Safety and security are continuing to be a big focus of the smart home because no matter what kind of household, everyone craves comfort and peace of mind. So as surveillance becomes more necessary than ever before to combat crime, with home burglary figures hitting a year high in WA alone last year , smart home products are now giving Australians families a greater sense of safety in their own homes. Connected safety and security systems and devices with remote monitoring capabilities are expanding their share of the global smart home market. This smartphone connectivity allows users not only to control and customise the operation of individual or connected devices, but also to receive real-time alerts and information from sensors in the home, like sudden temperature changes that can indicate a fire or a sound and movement that signal an intrusion. This is a great example of how AI and video analytics capabilities have advanced significantly over the past 12 months and are increasingly being built into smart home products to detect normalities and make homes safer. As a result, we expect to see more smart security systems in and beyond as well as the integration of smart security features into existing devices. What do you think of these predictions? For more information on how you can integrate smart products into your own home, get in touch with our Connected Home Specialists today.

was a big year for the smart home and is expected to be even bigger. In fact, smart home penetration is expected to hit % in , proving how the possibilities of smart homes widely appeal to Australian homeowners.

Posted on December 15, Get home from work, unlock the door, turn off the alarm system, turn on the heat, pre-heat the ovenâ€¦ all just a part of the daily grind. What if rather than doing all of that when you walk in the door, you could do it on your commute â€" or better yet, not at all? As our ability to connect devices and allow them to interact increases, so does the flexibility and efficiency of our lifestyle. And all of these interactions â€" and the potential for so much more â€" are made possible through the Internet of Things IoT. The connected car can now count itself as one of the key players in this new connected world. Tesla continues to be driving vehicle interconnectivity, bringing down the physical and communication barriers that once separated driver, home, car and office. How is the connected car linked to the connected home? Essentially, your Tesla can be connected to your home in two ways. For example, your car can interact with your house to trigger automatic responses based on its proximity. What would happen if the smoke detector went off and no one was home? By the time you found out, it might be too late to act. But with the option to receive alerts from connected home alarms, your Tesla can inform you and ensure fast response in the event of an emergency. Notifications can go beyond just emergencies, of course. Currently you can be informed when your favorite sports team wins a game, or when your teenager arrives home assuming they enter the house through a connected door or window! The connection of your car and home has interesting implications for streamlining and simplifying your life. As soon as you arrive home, your Tesla can spur technology into action. Everything from adjusting the temperature of your home to unlocking the door â€" minor tasks we take for granted could all become much easier and fully automatic. Not to mention the fact that these automated actions can help save energy, and reduce your carbon footprint. As the technology and connectivity of the Internet of Things expands, so will the convenience it affords. One thing many Tesla owners will find value in is how their car can augment interactions with their families. First and foremost is peace of mind. If your school-aged child is at home, the last thing you want to be worried about is whether or not you locked the door when you left. Your connected Tesla can make sure this is automatic â€" and not something forgettable. Your connected car can sync with fall-alert devices so you can keep a close eye on your parents and take quick action in the event of an accident. Beyond these security measures, a connected car can make your family life easier. The last thing you want is to fumble with your keys at the door for any length of time. Of course, when it unlocks automatically as you pull in the drive, this ceases to be an issue. And what about those reminders from your spouse? No longer do they manifest as an easily-misplaced piece of crumpled paper. What does the future hold for connected cars and homes? Even twenty years ago, no one could predict the connectivity we would be able to achieve in our lives now. As technology progresses, we can only guess at its future applications. Entertainment systems TV, stereo are also well represented in this class. Even major appliances have gotten into the mix with connected refrigerators. As video technology improves, its being applied to mundane tools like the doorbell. You can now video chat with the person on the other side from anywhere in the world, and this potential could extend to your car too. More video applications are on the horizon as well. Monitoring pets and young children is increasingly becoming a priority for homeowners. Soon, this will be possible from the convenience of anywhere, and anytime. IFTTT enables hundreds of products and services to interact with each other through this simple formula. With your connected Tesla, you can use this to do things like get notifications of important emails, automatically keep and vehicle use log, even have your Tesla send emails and text messages for you. All in all, the future looks bright for Tesla owners seeking a connected, convenient, and efficient life! EVE for Tesla currently connects to about 30 different devices with support for over devices and multiple smart home platforms coming very soon. It also integrates with IFTTT allowing you to connect your Tesla in thousands of different ways to hundreds of products and services. What about your connected car and the rest of the world? But a connected city can do more than just change lights â€" with a system of connected infrastructure you can see how it would be possible to reroute traffic in the event of an

emergency, or redistribute traffic to ease congestion. And it could do it all automatically â€" by communicating with the cars that are traveling within it. Connected cars communicating directly with each other also have significant implications for traffic and safety. Similar systems used on trains allow those trains to travel more closely together, increasing the number of trains capable of being run on a track over a specified period of time. Hypothetically the same should be possible for connected cars. Enter emergency vehicles into the equation and it may be possible to speed up emergency response time, and potentially save lives. In our next post we will continue to explore connected cars and the Internet of Things, and how autonomous vehicles may change the way we live.

Chapter 7 : Linking your Tesla to a connected home and beyond

Home Tech Innovations on the home-front: the smart home and beyond. Along with our hospitals and cars, our homes have always been a place in which you can find the very latest technology. At the moment, on the home technology front, the smart home is definitely where it's at.

Chapter 8 : Smart home technology: and beyond

Brett Jurgens is the co-founder and CEO of Notion, the complete home awareness solution powered by a multi-purpose IoT smart home sensor. The Jetsons was right. In the early 60s, they showed us a.

Chapter 9 : Smart Homes, Microsoft and the Networks Beyond

Gadgets and devices are great but this year's focus is going to be more on the why rather than the what.