BLUETOOTH DEVICES CONNECTIVITY USING 802.15 PAN IRDA INFRARED MILLIMETER WAVES RANGE(2.4 - 6 GHZ)

Nisha Mithal,Alphabet mountain view,California USA nishmith25@gmail.com cognitive sciences integrated with economics and Computer Science

Argonne National Laboratory provides battery research capability through the Joint Center for Energy Storage Research (JCESR) (Image source: Argonne National Laboratory, Microsoft Seattle USA,Startup bootcamp accelerator Australia

I.INTRODUCTION

ANN artificial neural networks recover your reproducible sound and vision clarity as its low carbon energy using silicon wave the effect it produces near bomb devices is extremely affective to sensory nerves and site versioning of 32 feet.Net is useful for all societies across the world fighting against nuclear weapons its basically Cognitive Sciences integrated Computer Science seismic activity detection using its waves in Bluetooth.

Devices as they are short haul waves for long distance communication. It works in a flexible environment adaptable to DARPA techniques as well battery market goes bigger and better in 2018. Advances in battery technologies hold the keys to

continuing progress in portable electronics, robotics, military and telecommunication applications, as well as distributed power grids. by: Kevin ClemensElectronics &TestDecember 26, 2017 Advances in battery technology, primarily through the application of lithium-ion battery chemistries, has made a mark in several distinct market segments, namely:

Portable electronics (cell phones and tablets) Military and telecommunications &Medical devices

Demand for battery power (courtesy LUX Research) Giga watts

2017	2020	2025
45	103	344
27	33	42
3	9	34

II.Clearly, transportation will remain the dominant market for batteries, with a forecast of dramatic growth as new electric vehicles are introduced. But EVs aren't the only battery game in town. Consumer electronics growth will be comparatively modest in the coming years. Because 63% of the planet's population already has cell phones- nearly everyone who can afford one has one there is not much growth potential. In addition, laptops are often replaced by tablets that use smaller-sized batteries. Consumers typically replace their high-tech devices every two years so from 2018 on, the handheld electronics market will be dominated by a replacement of existing devices with ones that are smaller yet more powerful and that use newer but only slightly more powerful battery designs.

technology Electric and hybrid vehicles Utility and renewable energy support This table indicates the present demand and a dramatic increase forecasted for battery power (in gigawatthours, GWh) for the transportation, consumer electronic, and stationary segments.

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renewable energy support will be reflected in the growing importance of stationary battery development. But there are questions about what kind of batteries these will be Better

III.A revolution began when the first commercial lithium-ion battery was produced by Sony in 1991, one that would move us toward a consumer electronics industry with cell phones small enough to fit in your pocket. Although normally, lithium-ion batteries are considered relatively safe, they do contain a flammable liquid electrolyte—an organic solvent— that can ignite under unusual circumstances. Indeed, Sony recalled 10 million laptop batteries in 2006 due to

contamination that caused cells to short circuit and start fires. Also, Samsung recalled millions of its Galaxy Note 7 smart-phones in 2016 after several cases when its lithium-ion battery also caught fire. Tesla batteries Tesla installs one of its Powerpack Lithium-ion storage batteries at the Hospital del Niño (Children's Hospital) in Puerto Rico (Image source: Tesla)

The development of solid-state lithium batteries that replace the flammable liquid electrolyte with a solid glass or polymer material has been under way for several years, and several manufacturers will introduce solid-state lithium batteries by the end of 2018. The solid material allows ionic transport between electrodes but is much less prone to short circuits and fires.

LUX Research's Christopher Robinson noted that, "Samsung could be ready by 2019 or 2020 with solid-state lithium batteries for cell phones. This would be the first disruptive change in lithium batteries in more than

Beyond hand-held devices, large-scale lithium-ion batteries are finding stationary utility applications. At the Hospital del Niño (Children's Hospital) in Puerto Rico, Tesla installed a distributed solar-powered system using its lithium-ion Powerpack to provide electricity following the devastation of Hurricane Maria. Tesla has announced six more energy projects for 2018 to help restore power in Puerto Rico, and, in 2017, installed what the company called the "world's largest lithium-ion battery"

(129 MWh) to support wind power generation in South Australia.

But will lithium be good enough? Lei Cheng, Assistant Chemist, Materials Science Division and Joint Center for Energy Storage Research (JCESR) at

Argonne National Laboratory, thinks lithium, **"… will** most likely not meet the demands of tomorrow." For future applications, Cheng noted, "JCESR is looking into battery chemistries with higher theoretical energy density made from more readily earth-abundant materials such as sulfur and magnesium."

Cheng said that although the lithium-ion battery will continue to improve in its energy density and cost, eventually new chemistries will be optimized for specialized applications, especially when more energy and faster charging is required.discharge 100% of their energy without damage. Going Forward

These advances in battery technologies -- from the introduction of solid-state lithium configurations in portable electronics, to the further development of utility-scale flow batteries -- hold the keys to continuing progress in portable electronics, robotics, military, and telecommunication applications, as well as distributed power grids. While lithium-ion batteries have proven to be the workhorse of the past decade, and they will continue to play a major role, specialized chemistries and configurations under development in 2018 and beyond will result in specific battery types to meet the needs of each application.

A.ANN,Bluetooth,irda(infrared),silicon

wave,32feet.net

*B.*WPF How to Send Data Through Bluetooth in a WPF Application Using 32feet.Net Sara Silva Sara Silva Dec 03 2014 Article 3 9 64.5k Facebook twitter LinkedIn Reddit Expand Easily Add PDF Word & Excel Function to Your .NET Apps Scope

IV.The solution in this article will implement the MVVM pattern and will use the MVVMLight Toolkit.

Bluetooth is an industry-standard protocol that enables wireless connectivity for computers, handheld devices, mobile phones and other devices.

Bluetooth is designed for use by C/C++ programmers. Some Bluetooth features are available with Windows Sockets. Familiarity with Microsoft Windows networking and Windows Sockets programming is required. The article Bluetooth Programming with Windows Sockets describes how to use Windows Sockets functions and structures to program a Bluetooth application and provide the Bluetooth connection sample. But

in a first attempt it does not look so nice when our goal is to create a WPF

Bluetooth, Infrared (IrDA) and more, easily accessible from .NET code. It supports desktop, mobile or embedded systems.

32feet.NET is available on Nuget and for desktop apps the reference is 32feet.NET 3.5.0 Nuget Package. That is the version we will use in the sample we will create.

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*V.C.*Entering Australia with the support of SBC and local energy companies! Dear WePower supporters, On 13th of December, 2017 Startupbootcamp Accelerator (SBC) announced that WePower is one of eleven energy companies, from a pool of thousands of global applications, to be chosen for the prestigious Australian energy track program. This global recognition marks several significant achievements to
WePower and all of us:

1.WePower will enter Australia in Q1 2018. WePower will scale in Spain and Australia simultaneously

2.One of the biggest accelerators in the world SBC has chosen WePower

to be its first portfolio company using a token ecosystem to incentivize and facilitate green energy adoption. This globally recognized accelerator is now a part of the crypto community supporting blockchain and its adoption.

One of the biggest accelerators in the world SBC has chosen WePower to be its first portfolio company using a token ecosystem to incentivize and facilitate green energy adoption. 3. Leading Australian companies will support WePower in entering and scaling in Australia:

a) Energy Australia— one of Australia's largest energy companies,

servicing the energy needs of over 2.6 million accounts and approximately 1.7 million customers nationally. Energy Australia owns and operates a multibillion-dollar energy generation portfolio, including coal, gas and wind assets.

b) Spotless—the largest integrated facilities

management services provider with clients across

s Australia and New Zealand with revenue close to 3.2 billion USD.

c) DiUS—Australian technology services company
dedicated to helping companies of all sizes innovate through emerging technology and its intelligent business application.

4.Trevor Townsend joins WePower team to help with scaling the company in Australia. Trevor is head of this Energy program and has an extensive background in Melbourne as an investor, director and founder. He was the Managing Director, Australasia at TIBCO Software, a Silicon Valley startup, which listed on NASDAQ in

2004, and designed the first wholesale energy software trading system in Australia during this time. He also has over 15 years of angel investing experience with numerous exits including two ASX listings.

SBC announced that WePower is one of ten energy companies to be chosen for the prestigious Australian energy track program. **"**We are absolutely thrilled to join the energy track of Australia's Startupbootcamp Accelerator program, as it is both a huge honour and achievement to have been chosen as one of the top energy startups from around the globe,**"— our CEO** Nikolaj Martyniuk said. **"**We will be able to work directly with

some of Australia's largest energy companies and providers, implementing our technology in Australia, to raise capital for green development projects and fix energy grid inefficiencies associated with high renewable energy penetration.**"** Among advisors of this energy program you can find other major Australian companies like CityPower & PowerCor, Viva Energy Australia, Sustainability Victoria, Clean Technology Partners, EnergyLab, Telstra, KHQ, Peer Academy, KPMG, Melbs Uni Teralab, Austpost, Levvel, Wilson Parking, Nova Systems, Clean Tek Market, Two Space, Randstad Newhouse, Nexec, Take2, Global Entrepreneurship Foundation and many other.

Startupbootcamp is one of the world's biggest startup accelerators with a global family of 20 industry-focused programs including IoT & Data Tech, Health, FinTech, Commerce, Food, Smart City & Living, Transportation and Energy. Startupbootcamp supports startups with direct access to an international network of 140 corporate partners, 3300+ mentors and events in more than 100 cities each year. Startupbootcamp has accelerated 460+ startups that have raised millions after graduation and continue to benefit from STBC expert community of alumni, partners and mentors.

“We are happy and thrilled to be in business with WePower!

VI.CONCLUSION

We see a lot of potential here in Australia and across the globe for the renewable energy market and people.**”—the co**-founder of SBC Ruud Hendriks said. Being selected for the prestigious accelerator program will support WePower**’**s goals of streamlining and simplifying the investment process and funding of green energy projects, and give the company the opportunity to engage with industry experts and leaders in order to scale its business and become an industryleading company.

“The 11 companies we have selected for our Smart Energy program are on the forefront of energy innovation, and WePower are bringing innovation to the financing of Solar projects and allows all consumers to participate in the green power revolution. In Australia we**’**ve seen a huge focus on FinTech, EduTech and other industries facing disruption and we are well-placed to be a global leader when it comes to innovative energy products and services. As an economy, we**’**ve always been on the forefront of energy production, especially with the ongoing political and corporate discourse with South Australia**’**s energy crisis,**”—Trevor Townsend said.**

“Through SBC**’**s global network of more than 140 corporate partners as well as the key players we have on board here in Melbourne, we**’**re confident the startups we**’**ve selected have the ability to not only change energy in Australia, but all over the world.**”**

Australia, we are coming!

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