Edwin A. Hernandez-Mondragon, PhD

Technology Leader and Innovator
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Introduction

Dr. Edwin Hernandez is a serial entrepreneur, inventor, and founder of "EGLA CORP." EGLA fosters innovation at the "EGLAVATOR," a technology incubator and accelerator located in Boca Raton, FL. Dr. Hernandez is an expert in technology ventures, wireless communications, AI, cloud computing, IOT, Radio Frequency, electronic devices, and advanced software platforms. Dr. Hernandez earned a B.S. in Electronics engineering from Costa Rica Institute of Technology, and a M.S in ECE and PhD in Computer Engineering from the University of Florida. Dr. Edwin is an inventor to *13 issued US Patents* and has provided technical consulting services in over 25+ intellectual property cases. As part of its daily life, he provides technical and startup strategy advice to several high-tech startups working in the areas of AI, streaming, blockchain, and health tech. Dr, Hernandez was a Fulbright scholar and has been a judge for the *"Mobile World Congress"* several times. Dr. Hernandez patents are licensed by wireless companies like Verizon Wireless. He is also *Microsoft* and *Motorola* alumni.

Areas of Expertise

- **Technology Innovation and Startups:**   Bringing new ideas to practice, investments, licensing and digital growth with advanced innovative ideas. .
- **Cable TV Systems and Broadcasting:** Streaming systems, Encoding, Transcoding, OTT Platforms and Systems, React Video Apps, Mobile Streaming, ATSC 3.0, Cable TV Multicasting, DVB-C, DVB-T an DVB-S, "Cloud to Cable TV," Set Top Boxes, MPEG Encoding, OTA Broadcasting, Casting, DOCSIS Standards.
- **Multimedia Streaming**: OTT Platforms, TV distribution, Music & Video Platforms and automated playlist creation, real-time encoding, CDN, and cloud storage systems
- **Mobile Devices and Systems**: Applications iOS & Android, User Interfaces in mobile, mobile operating systems, Expert in mobility and wireless roaming 2G, 3G, 4G & 5G systems (3GPP specifications Technical Specifications)
- **AirInterface, LTE, 5G NR:** LTE 3GPP Specifications, Standard Essential Patents**,** Experience with SDRs, Open Air Interface project, reviewing code for handover, RRC Channels, KPI, and handoff parameters (X2 S1AP and XN), Test Equipment, Drive Test, and 3GPP Specifications from Release 8 to16
- **Wearable Technologies:** Bluetooth, Low power, Board Support Packages (BSP), low-profile interfaces
- **Cloud Storage and Data Synchronization:** GlusterFS, File Systems, Dropbox/S3 integration. Cloud computing, Load balancing, AWS.
- **Wireless Communications**: 5G, 4G, 3G, LTE signaling, OFDM, Beamforming, WLAN, Software-defined Networks, and RF emulation with a patent in wireless emulation/dissertation on this field.
- **Blockchain**: Bitcoin, Litecoin, Consensus Algorithms, Gossip Protocols, ERC-20, DeFi, NFTs
- **Power Management:** Wireless Power Management Issued Patent for Microsoft Wireless Service and Wireless Charging Patent with over 130+ references
- **Personal Area Networking:** Expertise in Personal Area Networks and Wearable Systems. Issued Patent for Windows PAN Driver.
- **Artificial Intelligence and Machine Learning:** Computer vision, machine learning, Fuzzy Logic, Python, Neural networks, signal processing, speech processing, use of applications for big data.
- **Smart phones and wireless embedded software development**: Personal Area Networking, Virtual Machines and Operating Systems, Bluetooth

Academic Background

Ph.D., **University of Florida**, Gainesville, FL
Major: Computer Engineering,
Research Areas: Mobile Computing, Wireless Networks, Handoff Optimization, and Adaptable Network Protocols, Linear Prediction, Network Emulation
Dissertation: An Adaptive Networking Protocol for Rapid Mobility Environments
Advisor: Dr. Sumi Helal, August 2002

M.Sc., **University of Florida**, Gainesville, FL
Major: Electrical and Computer Engineering
Research Areas: Computer Networks and Intelligent and Information Systems (Artificial Intelligence). Thesis: Adaptive Sampling for Network Management
Advisor: Dr. Alan D. George December 1999

B.Sc. **Costa Rica Institute of Technology**, Costa Rica
Major: Electronics Engineering
Thesis: Monitoring system for a packet-based data network, RACSAPAQ
Advisor: Dipl-Ing. Luis P. Mendez   July 1995

Industry Experience

EGLA CORP & EGLAVATOR, Owner & Founder (10/10 – Present)
Technology Innovation, Intellectual Property Experts, Cloud and Streaming Platforms, E-Commerce. Creator of MEVIA and Cloud to Cable with 3 issued patents Dr. Hernandez assists as an Expert Witness Services for technical and damages for intellectual property cases, also provides strategic advice to startups & Innovators. Other experience with engineering applications for Infrastructure, Cloud-based Platforms, Telecommunications, Network Function Virtualization, Handover for 4G & 5G Systems, Software-defined Radios, IPTV, mobile, including managing and creating applications for IOS, Android, IPTV, Amazon Web Services, Wireless & Mobile Computing, Artificial Intelligence, Cloud Computing, Research & Development Lab, 3D Printing, IC Design, Device Testing & Claim chart analysis. (eglacorp.com)

- **Intellectual Property & Technology Expert Witnesses.** Advising strategic acquisitions and IP strategies for technology companies, Infringement reports, Invalidity Contentions, IPR Reports for PTAB, Damages calculations, Forensics, Code Reviews, Clean Room Analysis, assisting trials and attorneys with all Intellectual Property matters (**2014-ongoing**)

- **MEVIA and CloudtoCable** is a patented platform that merges cloud and Cable TV systems and simplifies music and video distribution to web, mobile and Cable TV. Cloud to Cable is servicing operators like CABLE COLOR in Honduras. MEVIA[1] is a "Software as a Service" and a cloud-based platform that enables "_MEVIA Music_" currently in operation in several countries including Brazil, Honduras, and United States. Supplied and maintained REST/SOAP/JSON APIs to handle more than 500K subscribers with SKY TUNES application. Our technologies powered DMX Media before its **$16M** acquisition by Stingray Digital in 2015 mediamplify.com, cloudtocable.com and www.eglacomm.net

- **EGLA CORP** owns a version of **MobileCAD and MobileIPP** in an LTE-based system with Software-defined Networks (Patented technologies) and in use with CBRS and a simulated EPC in a virtualized environment, built in 2019

- Member of **Licensing Executives Society (LES International),** Expertise in licensing intellectual property rights and monetization of patents and software.

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[1] Previously marketed under MEDIAMPLIFY®

EGLAVATOR, Technology Incubator & Office Spaces, Boca Raton, FL. (*3*/17 – Present)
Experience: Founder and owner of a Boca Raton-based technology incubator and accelerator with many startups in Cloud, 4G/LTE, 5G Systems, Prototyping and development of mechanical, electrical, and software products (www.eglavator.com) 3D Design & Assisting Startups for funding and technology direction: DEMOLIZER (CBS Biomedical), HydraFlush, and SAFEFI. Assisted Startups Projects:

- **PointsKash, LLC** – Points rewards to Blockchain
- **SEO TurboBooster and Pre-Dating** – Assisting strategy – partnerships
- **Conductions Labs, Inc** – Bluetooth and Directed audio Business development and strategy
- **MEVIA & Mevia Studios, Inc** : Streaming platform and web widget technology.
- **CBS Biomedical** in Partnership with EGLA CORP – engineering and development of a new version of a DEMOLIZER in 2018 – 2019 (Shareholder of CBS Biomedical, Inc)
- **HydraFlush, Inc**, redesign of mechanical transmission and parts for double-sided toothbrush in 2018
- **SAFEFI –** Safety-based with GPS location and tracking using a Bluetooth button and SAFEFI Zones (Patented Technology, licensed to EGLA CORP, Investor to STADSON Inc 2015-2017)
- Assisted **Cirrus Core Networks** with their NFV system and implementation of an LTE network with CBRS in 2016
- Several other ventures in e-Commerce, Education, and blockchain technologies.

MEVIA STUDIOS & TECHEDTV – Host & Broadcasting – Boca Raton, FL (3/18 to Present).
Experience: As part of EGLAVATOR's TV, Media studio. I host and produce TV shows in technology and business: ASK ALICE, TECHEDTV, and others with dozens shows & podcasts, covering Mobile World Congress 2019, HIMMS 2019, Consumer Electronics Show and others.

MOBILITY WORKX, LLC. Principal, **Boca Raton, FL (7/2016 to present)**
Experience: Patent commercialization of MobileCAD (Patent 7,231,330) a mobile emulation environment for **3G, UMTS, 4G LTE, & 5G** networks, mobility, PCRF, Diameter routing, RRC Signaling, propagation models simulation, virtual drive testing and RF scenarios and Mobile IPP (US Patent 7,697,508 and US Patent 8,213,417) for seamless mobility LTE, Self-Organizing Networks, S1 Handover, X2 handover, Xn Handover, etc. **Licensed Portfolio by Verizon Wireless and other large mobile players**

- Handover patents for X2, S1 in LTE Rel9-14 and XN and N2 Handover for 5GNR Rel15-ongoing standards
- Network and Wireless Emulation for LTE and 5G NR, and other IP-based RF environments.

Motorola Inc, Principal Staff Software Engineer, Mobile Devices, Plantation, FL (11/07-5/10)
Experience: Google Android Platform/Application Development, Kernel-level prototyping, Data support, implemented HTTP Push/MMS, DRM content management, Webkit and Opera- based browsers, Lead discussions with customer Sprint/Nextel and Nextel International. I defined Android architecture and the concept of iDEN+5, which seeded Android in Plantation. Assisted in licensing negotiations for Motorola as part of the licensing team.

Motorola, Inc Sr. Software Staff Engineer, Mobile Devices, Plantation, FL (11/03 -10/07)
*Experience***:** Feature lead for Java Virtual Machine for Dual-mode devices, J2ME Expert, JSR implementation on BREW architectures, and iDEN/CDMA software interactions. As a feature lead, program management interactions, customer interactions, and 3rd party vendor relationships including licensing (ie Qualcomm). Platform design and development for Windows CE devices and Microsoft Smartphone Platforms, i930 mobile phone.

Microsoft, Technical Program Manager*, Windows Networking,* Redmond, WA (8/02 - 9/03)
Experience: Feature lead for Bluetooth Personal Area Networking. Responsibilities driving Architecture, Design, Test Automation, security analysis for PAN, and drive testing over networking protocols such as IPv4 and IPv6 networks.

Microsoft, Program Manager Intern, Windows Networking, Redmond, WA (5/01-8/01)
Experience: Wireless Zero-Configuration (WZC) for Windows XP Service Pack, Power Management algorithm using self-similar traffic modeling, and adaptive adjustment of the duty cycle. IEEE 802.11b/g/a services could be optimized to reduce power consumption from 0 to 80% depending upon network traffic characterization.

COMPUNET, Entrepreneur/Lead Engineer Honduras (4/1997-11/09)
*Experience***:** Owner and founder. Cisco/Linux administrator, Webmaster and senior system engineer and owner. Lead developer for: authentication services, security, web, and networking configuration.

Leadership Positions and Awards

- Mentor for the FAU Business Plan Competition, 2021 – Team finalist at FAU TechRunway.
- Judge for the **Mobile World Congress** in Barcelona, Spain, 2019
- Judge for the **Mobile World Congress** for Best Networking Software Breakthrough in Barcelona, Spain, 2020.
- Judge for Startup POP, Startups in Boca Raton, FL.
- Founding member of **Honduras Global** dedicated to Entrepreneurship, Science & Technology
- **Fulbright-Scholar:** 1997-1999 – US State Department Program.
- 2018 Innovation Awards, City of Coral Springs, FL
- Nov 2018 - 3rd Place Hackathon with "*Eye of the Storm*" at Office Depot, Boca Raton, FL
- Top projects in Emerge Americas 2018 Hackathon with Video Anemometer, Miami, FL
- Fifth Place in Bitcoin Hackathon 2018 with Bitcoin Caster, Miami, FL https://github.com/win2013/bitcoin_alexa
- Winner of Kinect/Gesture-controlled Hackathon in Boca Raton, FL https://github.com/win2013/airthenticate
- Finalist and presenting EGLA COMMUNICATIONS at Florida Venture Forum in Coral Gables, FL 2015
- Finalist at "Emerge America's" Conference with Mediamplify/MEVIA in **2014**, Miami Convention Center
- Finalist with Mediamplify "Music Sparks" in LAB Miami, FL in 2015.
- Mention of honor in the Honduran National Science Contest, May 1997.
- Ranked 1st in undergraduate studies, Costa Rica Institute of Technology, July 1995.
- Four consecutive academic scholarships undergraduate work at Costa Rica Institute of Technology (ITCR), 1991-1995.
- Winner Business Plan Competition in **University of Florida** 2002 and Runner-up in 2001
- *High-Performance Computing and Simulation Lab* student award, spring 1999.
- In March 2001, as a co-founder of E-melodies, runner-up during the *2001 UF Business Plan Competition* at the University of Florida and winner of the *2002 UF Business Plan Competition in Information Technology*

Technical Expert Witness for Intellectual Property and Patent Cases

1. **University of Florida Research Foundation, Inc. et. al. v.** Motorola Mobility LLC**.** Filed in U.S. District Court for the Southern District of Florida – Case settled in 2014 (**Deposed)**
2. Virtela Technology Services **v. Andrew Funk**, File in the US District Court of Denver, Colorado, Expert Witness for Andrew Funk – Case Settled in 2016.
3. Del Castillo v**. Bank of America** – Expert Witness for Bank of America – Case settled 2017
4. **Seven Networks** vs. Google -   Expert Witness for Seven Networks - 2017
5. **Blue Radios** v. Kopin - Expert Witness for Blue Radios– Colorado - 2017 – ongoing **(Deposed)**
6. **Mobility Workx** v. T-Mobile – Case Settled – 2017 **(Deposed)**
7. **Mobility Workx** v. Verizon Wireless, Damages Expert Witness for Mobility Workx, LLC in E.D. Texas – 2017 – ongoing **(Deposed , Case Settled)**

8. **Mobile Manufacturer** v. Carrier, Eastern District of Texas, Expert Witness for Mobile Manufacturer (Confidential & Settled) in 2017
9. **Talent Mobile Development** v. Headios Group (California Federal Court, 2018 Trademark/Mobile Software) – Jury trial testimonial with 700k award to my client (**Trial Testimony)**
10. **Key West Golf Club** v. Cable Provider **–** Preliminary study – Key West, FL, 2019
11. **Express Mobile** v. DreamHost, LLC **–** Expert Witness – US District Court of Delaware - 2019
12. Stone v**. AT&T, Vehicle** – Expert Witness – Expert Witness for AT&T on TCPA Matters, MMS Messaging – US District of San Diego, 2019 **(Deposed, Settled)**
13. XCommerce v. **Express Mobile, Express Mobile** vs. BigCommerce, others – Expert Witness for Express Mobile. E.D District of Texas and California Northern District, Review code for client, claim charts, DOE, invalidity defenses, (**Deposed, Trial Scheduled**)
14. Workspot v**. Citrix** – Expert Witness IPR2019-01002- – Expert Witness for CITRIX - PTAB, 2019 - **(Deposed, Instituted but all claims held patentable)**
15. DISH Network LLC v. **Multimedia Content Management LLC** - IPR2019-01014 and IPR2019-01015, Expert Witness for Multimedia Content Management, LLC, 2019 (**Not instituted, Not Instituted**)
16. **TPI** vs Keller Williams, Inc – **Damages and Technical Expert Witness**, Trade secrets, software, Texas, 2020 (**Deposed, Settled)**
17. **Bell Northern Research, LLC** v. LG Electronics, Inc., et al, Infringement & Validity Federal Court, IPRs (3), California, **Settled, Terminated Institution**
18. **Bell Northern Research, LLC** v. Samsung et al, Infringement & Validity Federal Court, IPRs (3), California, Assisting infringements reports & damages models, Technical Expert Reports – Case **Settled, 2 IPRs not instituted**
19. **TCL -** assistance & consulting for several patents and IP cases.
20. **Barkan** v. Sprint **–** E.D. of Texas, Technical Expert Reports, Invalidity and Infringement Reports, **Deposed (Case Settled)**
21. **Kaiffi** v. T-Mobile, Verizon **- E.D. of Texas, Technical Expert Reports (**Streaming and wireless) (**Withdrawn by Client)**
22. **Flexiworld** v. Amazon, others, Texas Western District, Technical Expert Reports (Streaming Technologies**) (Withdrawn)**
23. Contour Data Solutions v. Gridforce, **CDW** – Pennsylvania E.D., Technical Expert Reports (Data Center, Cloud, Trade Secrets)
24. Mediatek, et. al v. **Nippon Telegraph**, **Nippon Telegraph** vs. Media Tek IPR2020-01607, Declaration and Reports, IPR and US District court (Modulation, RF, OFDM, other wireless comm issues, **Deposed IPR, Validity and Infringement).**
25. Netapp v. **Proven Networks**, IPR2020-01436, Declaration and Reports, and Federal Circuit Case, **Proven Networks v. NetApp, Deposed for IPR**
26. **BNR (Mobile / Wireless Patents)** – ITC Case U.S. International Trade Commission Investigation No. 337-TA-3568, Certain Electronic Devices Having Wireless Communication Capabilities and Components – Ongoing - Mobility Patents, WIFI
27. **L2MT** vs Google – moved to the Northern District of California, Claim Construction Assistance (on hold)
28. **Gravel Inc** v. T-Mobile, Amazon, and other defendants – E.D. of Texas
29. Advising - Pre-trial / 4 Confidential Defendants/Plaintiffs (2013-2014)

PTAB and IPR Cases

1. Workspot vs **Citrix**– Expert Witness IPR2019-01002-– Expert Witness for CITRIX – PTAB, (**All claims held patentable**) PTAB judges agreed with my analysis.
2. DISH Network LLC vs **Multimedia Content Management LLC**– IPR2019-01014 and IPR2019-01015, Expert Witness for Multimedia Content Management, LLC (**Denied, Not Instituted**)
3. LG Electronics v. **BNR** – Expert Witness for BNR - IPR2020-00108 for U.S. Patent No. 8,416,862 (**Terminated, Settlement**)
4. SAMSUNG v. **BNR** – Expert Witness for BNR - IPR2020-00611 (**Denied**) and IPR2020-00613 (**Not Instituted**) for U.S. Patent No. 8,416,862 – **Settled** (e.g. https://ptab.uspto.gov/036e63b4-9123-465b-b453-c3aa3c2ea4e)
5. Mediatek v. Nippon Telegraph, Inc – Expert witness for **Nippon Telegraph** IPR2020-01607, (Instituted, ongoing)
6. Netapp vs. Proven Networks, Inc – Expert Witness for **Proven Networks**, IPR2020-01436 (Settled).

Damages Expert Witness for Intellectual Property and Patent Cases

1. **Mobility Workx** vs. CellCo Partnership (Verizon Wireless), Expert Witness for Mobility Workx, LLC in E.D. Texas, Daubert challenged, scheduled to testify in court for reasonable Royalty **(Deposed, Trial July 26, 2021)** 2019
2. **TPI vs Keller Williams,** Damages Report on Trade Secrets, Reasonable royalties. **(Settled)**

Software Audits & Code Reviews

1. **Honduran Government**, "National Institute of Properties," Multi-million-dollar platform transferred from the World Bank to the Honduran Government - Code Review for Java, .NET, and Cybersecurity in **2017-2018**
2. Auditing of Honduran Elections, Forensics and fraud detection and analysis (Pro-Bono) in 2018
3. Auditing of Honduran Elections, Forensics and fraud detection (2021)
4. Code Reviews & Clean Room Environments
   - C/C++ sources from several vendors in 802.11, LTE, 3G systems, Bluetooth, BSP Systems, Augmented Reality, Wearable
   - Bash, Docker, PHP, Javascript, Typescript for e-commerce platforms
   - PowerShell and others for a Windows platform

Publications

1. J. Zablah, E. Hernandez, et.al "Enhance Honduras Development with Technology Transfer of High-Performance Computing," World Development Journal, Jan 2016.
2. E. Hernandez , "War of Mobile Browsers," IEEE Pervasive Computing, vol. 8, no. 1, pp. 82-85, Jan.-Mar. 2009
3. E. Hernandez, A. Ayyagari, "Heavily-tailed Network Traffic Modeling for Power Management", IEEE Workshop on Performance and Management of Wireless and Mobile Networks Australia, November 2005
4. E. Hernandez, M. Chideste, and A. George, "Adaptive sampling for network management," Journal of Networks and System Management (JNSM), Vol. 9, No. 4, Dec 2001.
5. E. Hernandez, A. Helal, "Predictive Mobile IP for Rapid Mobility," IEEE Conf. Wireless Local Networks 2004, Tampa, FL
6. E. Hernandez, A. Helal "RAMON: An emulation approach," IEEE Conf. Local Computer Networks 2002, Tampa, FL
7. E. Hernandez, A. Helal, "Examining Mobile-IP Performance in Rapidly Mobile Environments: The Case of a Commuter Train," IEEE Conf. Local Computer Networks 2001,

6

Tampa, FL, Nov 14-16, 2001.
8. Helal, S. Shah, E. Hernandez, "Mobility Benchmarking In Ad-Hoc Networks," The IPSJ Journal, Vol.43, No.11, June 2002. Approx. 15 pp.
9. S. Shah, E. Hernandez, A. Helal, "CAD-HOC: A CAD Like Tool For Generating Mobility Benchmarks In Ad-Hoc Networks," SAINT 2002, Japan, January 2002

Thesis and Dissertation

- E. Hernandez "*An adaptive protocol for rapid mobile environments*," Ph.D Dissertation, University of Florida, August 2002
- E. Hernandez. "*Adaptive sampling for network management*," M.Sc. Thesis, University of Florida, Dec 1999
- E. Hernandez, Y. Lee. "*Monitoring system of a packet data network,"* B.Sc. Thesis. ITCR, report, July 1995

Books

- Viva5G for Executives and Entrepreneurs – Q2, 2022
- Viva5G for Engineers and Scientists - Q2, 2022

Technical Reports and Prior to publications

1. E. Hernandez "MEVIA COIN – White Paper " – November 2021
2. E. Hernandez "Mediamplify: A Multimedia Platform for MPEG TV Systems, " Dec 2015
3. E. Hernandez, A. Helal, "RAMON: A network emulation environment," CISE Department, University of Florida, 2005
4. E. Hernandez, A. Helal, "Ghost Mobile IP," CISE Department, University of Florida, 2005.
5. E. Hernandez, "DMTF: Authentication for Mobile Phones," Motorola, defensive Publication, 2004

Patents and Innovations (13 Issued, 4 Patent Pending)

1. E. Hernandez, A. Ayyagari, et al. "Method and system for managing power consumption of a network interface module in a wireless computing device," Microsoft Corporation. **Issued US Pat. 7,564,810**
2. E. Hernandez, A. Helal, RAMON, "Rapid Mobility Network Emulator Method and System," University of Florida**. Issued US Pat. 7,231,330**
3. E. Hernandez, A. Helal, "System, Apparatus, and Method for Proactive Allocation of Wireless Communication Resources," University of Florida**, Issued US Pat. 7,697,508 and US Pat. 8,213,417**
4. S. Poursabahian, E. Hernandez, et al, "Bluetooth PAN Driver," Microsoft Corporation, **Issued US Pat. 7,269,388**
5. Krantz, E. Hernandez, et al "Rules-based Network Selection Across Multiple Media," Microsoft Corporation, **Issued US Pat 8,788,715, and 7,996,505**
6. V. Bhanu, E. Hernandez, et al, "Smart Scan for Bluetooth PAN Services, "Microsoft Corporation," **Issued US Pat. 8,024,487**
7. E. Hernandez, K. Ardizzione. "Thumb-based User Interface for Camera Phones," Motorola, Inc, submitted 2005
8. E. Hernandez, et al. "Java-based Push to Talk, " **Issued Pat 8,707,337**
9. E. Hernandez, "Secure USB Drive," Motorola, Inc, submitted 2005
10. E. Hernandez, J. Tracy "Magnetic Connector", Motorola, Inc, **Issued US Pat: 7,331,793 with over 140 references.**
11. E. Hernandez,– Issued US Pat: **10,123,074, 10,524,002, 11,140,441** Continuation in Preparation,

and European Patent Office (PCT No. 16/729,986 and 15874332.8)

12. E. Hernandez – Anemometer with Augmented Reality – April 2018 – Patent Application Filed and discontinued
13. E. Hernandez **-** SYSTEMS AND METHODS FOR IMPROVED BIOHAZARD WASTE DESTRUCTION SELECTION – Filed – Patent Application (PCT & USPTO) In January 2020, PCT PCT/US19/52276 notice indicated that found novelty, inventive steps met, and industrial applicability.

Broadcasting, Blogs & Podcasts

- FM Radio & Podcast – **Ask Alice** Show – May - August 2018
- Founder of TECHEDTV, EXPERT WITNESS TV – Host . http://teched.tv
- Technical articles at medium.com/@edwinhm and edwinhernandez.com

Software & Engineering Skills

Operating Systems Experience*:* Linux Operating Systems (*Expert Level*), Windows Platforms, AWS, Google Cloud, Microsoft Azure

Cloud Computing: AWS, Google Cloud, Azure, VmWare & XenServer, Docker Containers & Kubernetes. Cloud storage and platform development of multimedia delivery systems.

Marker Space & Electronics : 3D Printing, Sketching, Design, CAD/CAM, Circuit boards, logic boards, electronic components and RF engineering.

Block Chain Technologies: ERC-20, Solidity, Bitcoin, Ethereum, Binance, DEFI tokens, consensus algorithms, miners, NFT or Non-Fungible Tokens

Mobile Programming: iOS and Android. Android OS including Smart TV, IOS Development for iPad/iPhone/TV, Embedded Development with Raspberry PI. Legacy systems: Windows CE, J2ME, Blackberry RIM SDK, Motorola SDKs, Samsung SDK BREW, Qualcomm AMSS/DMSS.

Software Development languages: React, React-Native, Python (Django), PHP, Javascript (jQuery, NodeJS, AngularJS), Objective-C, Swift, Java, Java/Android, GNU C/C++, C#, VB.NET, Platform Builder, Java Micro-Edition, J2SE, and MySQL.

Machine Learning: Scikit, OpenCV, Python and Text-to-Speech Technologies

Multimedia Systems*:* Cable TV, DVB-C, DVB-S, IP Multicasting, Streaming Platforms, Encoding, Transcoding, Metadata, MPEG TS, Cable & Satellite Systems..

Wireless Protocols*:* GPRS, UMTS, 4G LTE Handoff, 5G XN, and NFV Platforms. Beamforming, Power Management, RRC Messaging, Femtocells, small cells, QXDM logs. Experience with Wearables, Bluetooth LE, BNEP, and many PAN systems. Wide experience with GSM, GPRS, and other legacy wireless standards such as CDMA 2000, iDEN, and others. Extensive experience with mobility protocols in UMTS, LTE, GSM, Mobile IP, MIH and research projects such as Cellular IP, HAWAII, AODV, and other systems. Expert level on WIFI, WPA-3, and IEEE 802.11 standards.

Software Defined Radios and Networks*:* GNU Radio, Propagation, RF and Software-based Emulation, Wireless Emulation, Fading, Modulation, & others

Internet Networking: In-depth knowledge of IPv4 and IPv6 protocols, IP tunnels, TCP/IP, Web Sockets. NDIS driver design in Windows platforms, PCAP, Experience managing and securing Cisco IOS routers networks & firewalls and SNMP management. Fiber optics, IP Tunnels, VPN, Switching, Redundancy.

Process Management: Github, JIRA, TFS & SCRUM

Data Center: Power Management, A/C, Electrical Distribution, Networking,

Scientific and Engineering Tools: MATLAB, pSPICE, OrCAD, Network Simulator (ns-2 and ns-3), wide experience in electronic circuit design, digital design, and low-level debugging tools, including PC-104 and circuit design.

Legacy Programming Languages: LISP, PROLOG, FOXPRO, Pascal, Embedded design, Intel assembly code (i8051, x86), and TCL/TK.

Technology Licensing

- The US patents Nos. 7231330, 7697508, and 8213417 are licensed by a major internet and wireless communications companies and are in use to manufacture millions of cellular devices and telecom carriers including **Verizon Wireless** as a licensee.
- US Patents 10,123,074 and 10,524,002 (**CloudtoCable** Patent Portfolio) campaign started for licensing.

Honors and Awards

- Mentor for FAU Business Plan Competition, Assisted Computer Vision for Elderly, 2021
- Judge for the **Mobile World Congress** in Barcelona, Spain, 2019
- Judge for the **Mobile World Congress** for Best Networking Software Breakthrough in Barcelona, Spain, 2020.
- Judge for Startup POP, Startups in Boca Raton, FL.
- Founding member of **Honduras Global** dedicated to Entrepreneurship, Science & Technology
- **Fulbright-Scholar:** 1997-1999 – US State Department Program.
- 2018 Innovation Awards, City of Coral Springs, FL
- Nov 2018 - 3rd Place Hackathon with "*Eye of the Storm*" at Office Depot, Boca Raton, FL
- Top projects in Emerge Americas 2018 Hackathon with Video Anemometer, Miami, FL
- Fifth Place in Bitcoin Hackathon 2018 with Bitcoin Caster, Miami, FL https://github.com/win2013/bitcoin_alexa
- Winner of Kinect/Gesture-controlled Hackathon in Boca Raton, FL https://github.com/win2013/airthenticate
- Finalist and presenting EGLA COMMUNICATIONS at Florida Venture Forum in Coral Gables, FL 2015
- Finalist at "Emerge America's" Conference with Mediamplify/MEVIA in **2014**, Miami Convention Center
- Finalist with Mediamplify "Music Sparks" in LAB Miami, FL in 2015.
- Mention of honor in the Honduran National Science Contest, May 1997.
- Ranked 1st in undergraduate studies, Costa Rica Institute of Technology, July 1995.
- Four consecutive academic scholarships undergraduate work at Costa Rica Institute of Technology (ITCR), 1991-1995.
- Winner Business Plan Competition in **University of Florida** 2002 and Runner-up in 2001
- *High-Performance Computing and Simulation Lab* student award, spring 1999.
- In March 2001, as a co-founder of E-melodies, runner-up during the *2001 UF Business Plan Competition* at the University of Florida and winner of the *2002 UF Business Plan Competition in Information Technology*.

Entrepreneurship & Ventures

EGLA CORP dba EGLA COMMUNICATIONS: Corporation behind the EGLAVATOR and other startups: Mediamplify & MEVIA Platform (Cloud to Cable TV), Expert Witness Consulting & Services, Software/Cloud hosting, Multimedia Delivery Services, EGLA.ai - Artificial Intelligence and HulaDrive. For additional, information: www.eglacomm.com | www.eglacorp.com

- **EGLAVATOR:** Technology incubator in Boca Raton, FL www.eglavator.com
- **Mobility Workx, LLC:** Principal, 3G/4G Emulation and Mobile Independent Handoffs under patents US7231330, US8213417 and US7697508 also known as MobileCAD and MobileIPP. www.mobilityworkx.co
- **UBIWIRELESS, LLC dba EDWIN HERNANDEZ, LLC :** Founder & owner. This company dedicated to IP Monetization, previous projects include RxProfile™ (http://rxprofile.net), FUTMOB, and Ad2Fone, among others (Mobile Applications). Licensing entity of EDWIN HERNANDEZ.

COMPUNET S. de R. L. Founder and CTO, Honduras pioneer Internet Service Provider founded in 1997 completed operations in November 2009, one of the first ISPs in Honduras.

Personal Information

- **Hobbies:** Guitar playing, running, soccer, volunteering for charities, option and derivatives trading.
- **Citizenship:** Honduran and US Citizen
- **Religion:** Catholic - Salesian Alumni – Instituto Salesiano San Miguel

Services and Memberships

- Member of **Industry Advisory Board** for Florida Atlantic University, Electrical and Computer Engineering Department, 2017-present
- **GSMA – 2019 & 2020 Mobile World Congress**, Judge, Barcelona, Spain
- Emerge Broward and Leadership Broward Member 2014-2016
- Organizing Committee, Mobile Mondays Miami, 2009-2013
- Organizer "Startup Weekend Boca," October 2013
- Hispanic Graduate Student Association, Finance chair, 2001-2002
- Hurricane Mitch Volunteer, Gainesville, FL. October 1998
- ACM, IEEE member, dancing, soccer, and Tae Kwon Do, black belt
- St. Andrew's Catholic church, Life Teen, Coral Springs, FL, 2004-2005
- Member of Lovebags.org, 2007-2009
- Member of Society of Hispanic Professional Engineers, 2009-2010

Technical Program Committees/Reviewer for International Conferences

- 2021 TELKOMNIKA (reviewer)
- 2021 CICN - International Conference on Computational Intelligence and Communication Networks (Technical Program Committee)
- 2021 3rd ICERA – International Conference on Electronics Representation and Algorithms (Reviewer)
- IJ-ICT 2021 – International Journal of Information and Communication Technology (Reviewer)
- IJEECS 2021 – Indonesian Journal of Electrical Engineering and Computer Science (Reviewer)
- IJRES – International Journal Research Education and Science 2021 (Associate Editor),
- The International Conference on Communication Systems and Network Technologies (CSNT2021)
- ICCAIST 2021: 4th International Conference on Computer Applications & Information Security, Saudi Arabia.
- 2020 TELKOMINKA, Telecommunication, Computing, Electronics and Control
- Editorial Board of **Indonesian Journal of Electrical and Computer Engineering** 2021
- 2020 CICN - International Conference on Computational Intelligence and Communication Networks
- 2020 BDAW - Big Data and Advanced Wireless Technologies,
- 2019 International Symposium on Electrical and Electronics Engineering, ISEE2019.
- 2019 IEEE Asia-Pacific Conference on Applied Electromagnetics (APACE2019)
- 2019 1st International Conference on Cybernetics and Intelligent System (ICORIS) 2019.
- 2019 IEEE Game Entertainment and Media – Ireland
- **Editorial Board Member and Reviewer**, Journal for Networks and Systems Management, from

2004-present

- 2018 Journal of Simulation: Transactions of the Society for Modeling and Simulation International
- 2018 International Conference on Information and Communications Technology (ICOIACT
- 2017 2nd International conferences on Information Technology, Information Systems and Electrical Engineering (ICITEE)
- 2016 Global Summit on Computer and Information Technology
- 2016 International Conference on Information Technology, Information Systems, and Electrical Engineering
- 2016 Recent Advances in Communications and Networking Technology
- WCI 2015 – Women in Computing and Informatics
- 2012 (2012 IEEE Symposium on Wireless Technology & Applications).
- IEEE International Consumer Networks, 2011
- IEEE Broadnets - 2008
- IEEE Wireless Networks Magazine, 2002-2003
- IEEE Transactions on Mobile Computing 2007
- IEEE Wireless Local Networks 2005-2007
- IEEE Local Computer Networks 2007-2008
- IEEE GLOBECOM 2005
- IEEE SOUTHEAST CONFERENCE 2005
- IEEE Conferences in 2014-2015
- 2004-2009 - Panelist at 4G Wireless (Miami Beach, FL), several "Mobile Monday" events, and Mobile Commerce Latin America (2009).

Tutorials

- Electrical and Computer Engineering Technology Faculty, Rochester Institute of Technology (RIT), Tutorial on LTE Emulation & Signaling for Handover, September 2020
- WEBCONF Latino 2010, Tegucigalpa, Honduras.
- Mobile Computing Platforms, Tegucigalpa, Honduras.
- IEEE SOUTHEAST CONF 2005. "Windows Cryptographic API," A Session Keys Paradigm.
- *Keynote speaker* at "First Tuesday" Tegucigalpa, Honduras, and San Salvador, El Salvador

Training

- **Tucks Schools of Business – Dartmouth University**, Digital Strategies for Entrepreneurs, Google Campus, Seattle, WA, and December 2016.
- **Management Skills and Business Strategies**, FAU Campus, Boca Raton, FL, January 2014

Languages

Fluent in Spanish and English. Basic knowledge of German and French

Teaching Experience

Teaching Assistant for Mobile Computing, *University of Florida*, (Spring - Fall 2001)
Experience: Mobile Computing is level-6000 graduate class. The class involves the discussion of research papers and a practical section where different wireless technologies are covered. In addition to my job duties, an automated examination tool was developed as additional class aid for grading. The class required J2ME/JSEE knowledge and the ability to support the class with Motorola smart phone development, plus all additional aid required to run the killer application competition sponsored by Motorola.

Teaching Assistant for Software Engineering, *University of Florida* (Fall 2000)
Experience: The class was targeted to computer engineering seniors as an introduction to the software development cycle. Students carry-on a web-based project and deliver specific documents and specifications (architectural, design, UI), develop a prototype, schedule different tasks, and manage the project to be delivered on time. The TA assists technically and supervises their work, grades quizzes and exams

Teaching Assistant for Introduction to CIS/Java, *University of Florid*a (Summer 2000)
Experience: I taught an introductory lab session, graded quizzes, exams, and assignments. As an assistant I held different tutorial sessions on object-oriented concepts and problem-solving skills.

Teaching Assistant for C++, *University of Florida* (Spring 2000)
Experience: Grading and preparing assignments for the class.

Instructor at the Central American Internetworking Conference, (9'1998)
Experience: During the conference, I taught a 3-day intensive hands-on class on network security. I covered topics from: network intrusion detection, privacy, and authentication mechanisms

**Instructor*, Central American Telecommunication Videoconferencing* (Summer 1996)
Experience: Teaching Linux (Operating Systems), C++, and Networking seminars to engineers all over Central America (Remote teaching)

Central American Telecommunication Commission*,* Engineer, Honduras, (8/1995 – 5/1997)
Experience: Network Engineer, Videoconference systems (VTEL and H.323), software development for telecommunications and traffic management

United Nations Development Program (UNDP), IT Consultant, Honduras, (11/1996 – 5/1997)
Experience*:* Network security and consultant for the United Nations program in Honduras. Software auditing and network configuration

Research Experience

Research Assistant, *University of Florida,* Gainesville, FL (Jan '00 – Aug '02)
Experience: I investigated the effects of handoff and network mobility at different vehicular speeds. I used Mobile network simulation and emulation were important tools to study Mobile-IP and Layer-2/3 mobility protocols. I developed RAMON, Rapid Mobile Network Emulator, a device that emulates network layer mobility and programmatically replicates mobility conditions varying from signal strength, packet delay, BER, and speeds. RAMON uses real 802.11b Access Points, Omni-directional antennas, embedded computers (e.g. PC-104) and custom-build control circuitry. RAMON also used a .NET interface to automatically create network topologies to be emulated. In depth routing protocols explored, IP tunnels, and low-level network device driver adjustments. I conducted extensive simulation work on ns-2

Research Assistant, *University of Florida*, Gainesville, FL (Sep '97 - Dec '99)
Experience: I joined thee High-performance Computing and Simulation Research Lab. During my thesis work, I applied Fuzzy Logic in Network Management, focusing on how adaptive sampling could reduce captured statistics without losing important network behavior. Additionally, I researched ATM networks, SNMP (Simple Network Management Protocol), Virtual Interface Architecture (VIA) over Myrinet, CORBA, and High-performance Cluster Computing topics.

Program Manager Intern, *Microsoft Corporation*, Redmond, WA (May – Sep '01)
Experience: As an intern, I investigated self-similarity and power management algorithms for Wireless Networks. I modeled the method how service time per packet could be estimated and used for QoS in ad-hoc and infrastructure networks.

Network Engineer, *Radiografica Costarricense, R&D,* Costa Rica. (Jan - Jul'95)
Experience: I developed a microcontroller-based (x8051 and RUPI-51 micro-controllers) system to measure X.25 and PBX data traffic, Windows-based GUI, and X.25 frame captures

References

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