

Network Engineer/Architect/Technologist, with over 15+ years' experience in the networking industry and with high-level hands-on Architecture Design & Implementation with a track record of evaluating core business functions, issues and needs and developing projects from concept to completion. Senior IEEE member, actively involved in the development of IEEE Std 802.3/802.1 P2P/P2MP Ethernet standards. Distinguished Engineer working on data, video, and voice product design and implementation, testing, and finally deployment production networks at the US national level.

PROFESSIONAL EXPERIENCE:

RG Nets, **Director of Solutions Engineering** – March 2025 – Present

- Lead and Mentor a Solutions Engineering Team: Recruit, hire, train, and manage a team of Solutions Engineers, fostering their technical and presentation skills, and ensuring professional growth.
- Technical Pre-Sales and Deal Support: Drive the technical aspects of the sales cycle, including delivering compelling product demonstrations, conducting deep-dive technical presentations, and responding to complex RFPs/RFIs.
- Strategic Technical Advisor: Act as a trusted technical advisor to prospective and existing customers, understanding their unique challenges and architecting tailored solutions leveraging the company's software products.
- Cross-Functional Collaboration: Serve as a critical bridge between Sales, Product, Engineering, and Customer Success teams, ensuring market feedback influences product roadmap and that technical solutions align with product capabilities.
- Solution Architecture and Design: Oversee the development of technical solution designs, architectural diagrams, and proof-of-concept (POC) frameworks that demonstrate the value and feasibility of proposed solutions. Platform testing, validation, and development in collaboration with other engineering teams.
- Market and Competitive Intelligence: Maintain a deep understanding of industry trends, customer pain points, competitive landscapes, and emerging technologies to position solutions effectively.
- Enablement and Content Creation: Develop and refine technical sales collateral, demo environments, best practices guides, and training materials for both the Solutions Engineering team and the broader sales organization.
- Process Improvement and Standardization: Establish and optimize repeatable processes for technical discovery, solution scoping, demo delivery, and technical win strategies to enhance team efficiency and effectiveness.
- Revenue Contribution and Quota Attainment: Directly contribute to sales goals by technically validating opportunities, accelerating deal cycles, and ensuring proposed solutions drive customer value and adoption.
- Customer Relationship Management: Build and nurture strong technical relationships with key customer stakeholders, becoming a go-to resource for technical insights and long-term strategic planning.

Charter Communications, **Network Architect, Distinguished Engineer** – September 2013 – March 2025

- Responsible for access and transport network architecture, including:
 - o Lab evaluation of Optical Line Terminal (OLT) and Optical Network Unit (ONU) products from various vendors, including interoperability testing, documentation, and development of network policies and deployment strategies
 - o OLT and ONU firmware evaluation and testing, field deployment, and supervision
 - o Assessment and evaluation of customer needs, development of tailored solutions in collaboration with customer-facing teams, supervision of implementation in the production network
 - o Implementation of network device compliance policies based on HPNA
 - o Development of Python / Bash / Perl scripts for telemetry extraction and data mining from fleets of network elements as well as centralized controllers for the entire plant
 - o Troubleshooting of any customer issues escalated past L2/L3 tech support, lab reproduction, solution development, and deployment into production network; interfacing with vendors to develop solutions for any identified problems. Regression testing in lab conditions.
 - o National video distribution system for Ethernet and DOCSIS-fed set top boxes, Title VI compliant video distribution architecture with dynamic BGP signaling for video CDN prefixes
 - o 802.1X-based edge security architecture for Spectrum Enterprise
 - o National Fiber Internet Access (FIA) architecture with RPKI-enabled ROV edge protections
 - o National L2 Ethernet (P2P and P2MP) services over EVPN-based underlay
 - o National-level service performance and service monitoring standards for L2 and L3 services, based on Y.1564, TWAMP, and Y.1731 solutions based on automated testing (truck roll elimination)
 - o National QoS policy for edge and core network in Charter
 - o Development of community Wi-Fi solution architecture with fiber and direct DOCSIS backhaul options to address the need of high-density Wi-Fi deployments in MDU, university residences, and similar scenarios
 - o National C3 (converged core) architecture for Charter and initial lab testing + operational support during migrations
 - o National Precision Timing Protocol (PTP) architecture for Distributed Access Architecture (DAA) and Spectrum Enterprise services with multiple levels of redundancy

Nokia Exhibit No. 1003

Nokia v. SPADA

IPR2025-01442, U.S. Patent No. 11,589,142

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- National Network Time Protocol (NTP) architecture for core and customer networks
- Development of Wi-Fi solution architecture for hotels, residences, and hospitals relying on internal coaxial cabling and remote PHY-based DOCSIS delivery with a centralized vCMTS deployment model; security assessment of the system architecture, device code (transport and edge), and provisioning system
- Implementation of TR-369 management suite for integrated DOCSIS 3.1 CM / Wi-Fi 6E/7 gateway (Commscope DG6450 and Gemtek WCAD-101BE), including a distributed iPerf speed measurement solution over a softGRE-tunneled micro-segmented SD-LAN architecture
- Vulnerability scanning and mitigation for lab devices and production code for transport and edge devices for a variety of Ethernet, PON, and DOCSIS platforms; close cooperation with production security team for vulnerability classification and mitigation recommendations
- Development of security-focused processes for provisioning systems, device deployment, and code review for network operations teams;
- Extensive hands-on experience with variety of Cisco (ASR, Catalyst, and Nexus device families), Meraki (Wi-Fi AP, switch, and firewall device families), Juniper (MX, QFX, SRX, and EX device families), Nokia (ISAM access, MF fiber access, and Lightspan FX device families), Fortigate firewalls, Palo Alto firewalls, and Arista switches
- Extensive hands-on experience with KVM, ESXi, and Hyper-V virtualization environments.
- Planning and implementation of maintenance, monitoring, and upgrade strategies for a national-scale optical access data network with over 13k accounts and 150k active devices.
- Planning and implementation of network-wide upgrades from first-generation legacy Salira/Hitachi OLTs to second-generation Sumitomo FSU 7100 OLTs (1G-EPON and 10G-EPON capable) affecting ~70 hubs across a national footprint. Evolution towards 25G-EPON systems in the future.
- Co-developer of a lab testing automation tool based on Spirent iTest/Test Center for one-click platform testing
- Development of new products, write-up of associated architecture and implementation documentation, lab testing, field trial validation, and support of field trials. Tier 4/5 support for fielded products and services.
- Actively vested in the development of various P2P and P2MP Ethernet link technologies in IEEE 802.3 Working Group (<http://www.ieee802.org/3/>), including P802.3av, P802.3bf, P802.3bp, P802.3bn, P802.3bk, P802.3cc, P802.3ca, P802.3cs, P802.3cp and many other projects. Technical supporter, technical contributor, editorial contributor, and Chair on many of the aforementioned projects up to date.

ZTE Corporation, **xPON Standardization Director, Fixed Access Product Line** - September 2008 – September 2013

- Leader for a Standard Development Organization (SDO) team working from Shanghai, China, consisting of the standard development and technology development engineers, with the work focused on a number of standard development organizations, in particular in IEEE, ITU-T, FSAN and Broadband Forum, to enforce the business interest of ZTE.
- More than 500 technical and editorial contributions to various standard drafts (IEEE 802.3av, IEEE 802.3ba, IEEE 802.3az, IEEE 802.3.1, IEEE 802.1AS, IEEE 802.3bf, IEEE 802.3bn, IEEE 802.3bk, IEEE 1904.1, G.987, G.987.1, G.987.2, G.987.3, WT-200 in BBF), developed together with the team
- Support for the ZTE marketing team, with technical presentations and clarifications, in Europe, US and China.

Siemens/Nokia Siemens, **Research Engineer / Access System Architect** – October 2004 – September 2008

- Standardization activities for IEEE (P802.3av, 10G-EPON) and FSAN/ITU-T (Next Generation Optical Access - NGOA):
 - Assistant Editor for P802.3av, responsible for Clause 91 (PMD, physical sublayer specifications) and Clause 93 (MPCP for 10G-EPON, control plane specifications)
 - Active contributions to FSAN NGOA standardization process
- System architecture for GPON class access solutions
 - Detailed analysis of VLAN handling schemes in NSN hiX57xx class system:
 - Analysis of customer demands in terms of bandwidth control and service isolation via appropriate VLAN allocation schemes
 - Analysis of security threats in GPON and specifically in NSN hiX57xx, including MAC anti-spoofing and MAC flood prevention mechanisms
 - Multicast support in NSN hiX57xx in conjunction with VLAN handling
 - Virtual routing for future generations of NSN hiX57xx

Certifications:

- CWNA/CWAP/CWSP/CWDP (https://www.cwnp.com/cwnpVerification.php?cwnp_id=613805&Submit=Verify)

- Certified Information Systems Security Professional (CISSP #2432234) under review
- Juniper JNCIA-Junos (<https://www.credly.com/badges/906edfb1-813a-4726-997e-816d925d2293>)

Education:

- University of Coimbra, Department of Electrical and Computer Engineering, Coimbra, Portugal, PhD in Electrical Engineering, Optical Communication Systems
- Bialystok Technical University, Department of Electrical Engineering, Chair of Optical Radiation, Bialystok, Poland; MSc / Engineering Degree in Electrical Engineering, Optical Communication Systems

Patents:

- 36+ utility patents issued by the USPTO, many of which include international registrations: <https://patents.google.com/?inventor=Marek+Hajduczenia>
- 70+ utility patent submissions at US and international agencies in various stages of review