

Brian Baker

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SUMMARY

Experienced communication system engineer with a breadth of knowledge uncommon among Satellite Network Engineering peers. Over 20 years of experience in Satellite Network/RF Engineering combined with nearly 10 years of software/system design, integration and testing for a well-rounded view of communications systems.

- System Design
- Link Budgeting
- Antenna Pattern
- Multiple Access Methods
- HTS, Wide Beam
- Spread Spectrum
- LEO, GEO
- TT&C
- Modulation, Coding
- Ground System Design
- Spectrum Management
- Noise Cancellation
- MySQL, NoSQL
- Routing, Switching
- Javascript, Angular, React
- Linux, Windows
- IP Network Design, CSP
- Process Automation
- Quality of Service
- Node.js, Python, Shell
- HTML, CSS

PROFESSIONAL EXPERIENCE

Four Nines LLC

2013 - Present

Four Nines specializes in Communications Systems design, implementation and operation. Clients include Panasonic Avionics Corporation, Oncall Communications, VT iDirect Inc, General Communications Inc and Spinlaunch.

Satellite System Engineer

- Performed link budget analysis for LEO satellites
- Specified equipment as needed for mission requirements
- Tradeoff analysis of buying vs building C2 (command & control) software
- Work with GSaaS (ground station as a service) provider on link budgeting, ground station selection, licensing and software integration.
- Develop Ground TT&C software interface between satellite and C2 software. This includes API, CSP and serialization protocol integration.
- Flatsat/lab setup including building a test modem using SDR/GNUradio, component testing and modem testing in a cleanroom environment.

System Engineer/ Software Architect

- High level design for custom Multiple Access system incorporating multiple vendors.
- Worked with client to confirm milestones and adapt to changing requirements.
- Managed several developers from around the world.

Satellite Systems Engineer/ Software Developer

- Onsite support for deployment of new iDirect modem platform and associated software
- Assisted with existing network support and high-level troubleshooting
- Develop iDirect software and API to integrate customer infrastructure with vendor equipment
- Worked with clients and engineers to resolve bugs
- Developed custom solutions for large iDirect customers with usage needs not met by production platform

Panasonic Avionics Corporation

2011 - 2013

Panasonic Avionics Corporation collaborates with over 300 airlines to provide inflight entertainment and internet connectivity to thousands of aircraft. In addition to the airline industry, Panasonic operates in the Maritime, mining and other industries where remote connectivity is needed.

Lead Network Operations Engineer

- Lead team of 5 engineers and administrators.
- Worked with other groups to develop new site installation procedures and processes.
- Escalation point for lower tier operations administrators.
- Conducted installations and upgrades to network infrastructure and remotes.

Senior Satellite Network Engineer

- Design, develop and support the global satellite network.
- Designed and built full lab for software and system testing.
- Test new software releases to verify compatibility.
- Built tools for tracking and managing space segment.
- Escalation point for operations and other engineering groups.
- Research new technologies and trends in the satellite/telecom industry.
- Compared operational metrics and investigate any discrepancy.

General Communication Inc

2001 - 2010

Provides satellite, terrestrial wireless and wired communication services in Alaska. GCI is the leading connectivity provider in Alaska as well as many other remote locations throughout the US.

RF/ Satellite Engineer

- Lead engineer for large (Comtech EF Data) SCPC network utilizing carrier cancellation technology.
- Managed network spectrum allocation and access.
- Tested new software and RF equipment before deployment to network.
- Built install specifications for new sites for microwave, SCPC and TDMA networks.
- High level escalation point for operations and installation groups.
- Software Regression testing for iDirect and Comtech EF Data platforms

EDUCATION & CERTIFICATIONS

University of Alaska, Fairbanks	2003
Bachelor of Science, Electrical Engineering – Digital Design emphasis	
Cisco Systems, Inc	2012
Cisco Certified Network Associate (CCNA)	