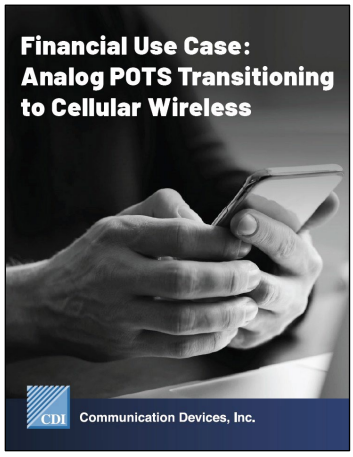
Communication Devices, Inc.

carahsoft.



Financial Use Case: Analog POTS Transitioning to Cellular Wireless

CDI Case Study

Thank you for downloading CDI's Financial Use Case: Analog POTS Training to Cellular Wireless case study. Carahsoft is the distributor for CDI's Out-of-Band Management (OOBM) solutions available via NASA SEWP V, OMNIA, E&I and other contract vehicles.

To learn how to take the next step toward acquiring CDI solutions, please check out the following resources and information:

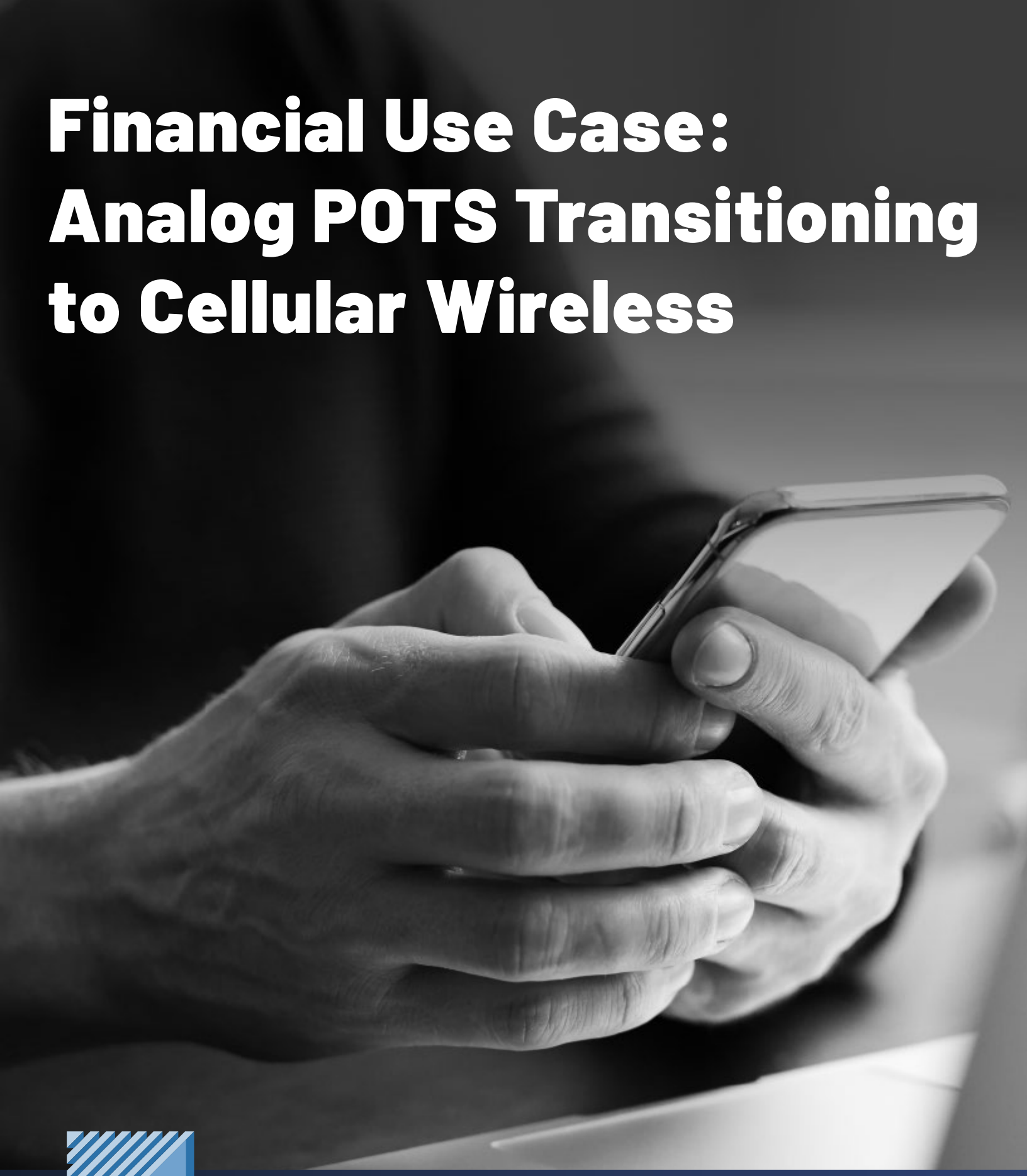
For additional resources:
carahsoft.com/CDI

For additional cybersecurity solutions:
carah.io/CybersecuritySolutions

To set up a meeting:
CommunicationDevices@carahsoft.com
888-662-2724

To purchase, check out the contract vehicles available for procurement:
carah.io/CDIContracts

Financial Use Case: Analog POTS Transitioning to Cellular Wireless



Communication Devices, Inc.

Executive Summary

For more than twenty years, enterprises, government agencies, and data center operators relied on analog POTS (Plain Old Telephone Service) lines to support Out-of-Band Management (OOBM) for critical infrastructure. These circuits provided the dial-in access that enabled remote recovery, troubleshooting, and uptime assurance.

Today, however, POTS is **effectively obsolete.** Major U.S. carriers have deregulated, decommissioned, and discontinued analog services. Availability is shrinking, support is declining, and prices have surged—often exceeding **$200 per month per line** once cross-connect and facility fees are included.

CDI provides a modern, secure, and dramatically more cost-effective alternative: **private static-IP LTE OOBM over private APNs from Verizon or AT&T for just $15/month per site.** Combined with CDI's **FIPS 140-3 validated cryptographic module—the only one in the OOBM market**—organizations can reduce cost while simultaneously increasing security and resilience.

This whitepaper outlines the technology shift, the financial benefits, and the security improvements gained by replacing legacy POTS circuits with CDI's private LTE-based Out-of-Band Management.

The Historical Role of POTS in Out-of-Band Management

From the early 2000s through the mid-2010s, POTS lines were the most common mechanism for accessing remote infrastructure during outages. They were simple, ubiquitous, and offered physical-layer isolation from the production network.

However, three major changes have ended this model:

1. **POTS lines are no longer guaranteed** — deregulation allows carriers to retire copper networks at will.
2. **Availability has dropped sharply** — especially outside metropolitan areas.
3. **Costs have increased dramatically** — driven by infrastructure retirement and cross-connect expense.

The result: many organizations cannot acquire or maintain POTS lines at any price, and those that can often pay **$200–$250+ per month** per location.

OOBM strategies must therefore evolve.

The Rise of LTE for Out-of-Band Management

Over the past 25 years, U.S. telecommunications providers have invested heavily in cellular wireless. The number of active cell sites has grown from **100,000 in 2000 to nearly 400,000 in 2019,** a fourfold increase.* This expansion has produced:

- Exceptional LTE coverage
- Higher network reliability
- Greater bandwidth
- Far lower operating cost
- Rapid provisioning and deployment flexibility

With LTE universally available and supported by all major carriers, cellular OOBM has become the preferred method for enterprises looking to replace analog telco lines.

CDI's Modern LTE-Based OOBM Solution

CDI offers a next-generation Out-of-Band platform featuring:

✓ Private Static IP Addressing
Your OOBM devices never touch the public Internet.

✓ Private APNs on Verizon or AT&T
Network isolation equivalent to a private MPLS network.

✓ $15/month flat-rate LTE transport
A predictable cost model that is 80–95% lower than legacy telco pricing.

✓ Industry's Only FIPS 140-3 Validated Security Wrapper
No other OOBM vendor offers FIPS 140-3 cryptographic protection—essential for federal, defense, and regulated industries.

✓ U.S.-designed and U.S.-built hardware
Ideal for government, defense, utilities, and critical infrastructure.

This model provides secure, resilient, always-on OOBM that eliminates dependencies on failing copper networks.

Financial Analysis: 500-Site Enterprise

To quantify the impact, consider a mid-sized organization with **500 OOBM-enabled locations.**

Legacy Analog POTS Model

- **Monthly cost per line:** $200
- **Locations:** 500

Annual OPEX – POTS

500×200×12=1,200,000 USD500 \times 200 \times 12 = 1,200,000\ \text{USD}500×200×12=1,200,000 USD

Annual Cost: $1.2 million

This number continues to rise as carriers retire copper, and many locations experience additional monthly cross-connect charges.

CDI LTE Private APN Model

- **Monthly cost per site:** $15
- **Locations:** 500

Annual OPEX – CDI LTE

500×15×12=90,000 USD500 \times 15 \times 12 = 90,000\ \text{USD}500 ×15×12=90,000 USD

Annual Cost: $90,000

This includes private-IP LTE service, private APN routing, and transport isolation.

Annual Savings (500 Sites)

1,200,000−90,000=1,110,000 USD saved annually1,200,000 - 90,000 = 1,110,000\ \text{USD saved annually}1,200,000−90,000=1,110,000 USD saved annually

10-Year Savings

1.11 million×10=11.1 million USD1.11\ \text{million} \times 10 = 11.1\ \text{million USD}1.11 million×10=11.1 million USD

A 500-site transition from POTS to CDI LTE yields:

- **Over 92% reduction in OOBM transport cost**
- **$1.11M annual savings**
- **$11.1M saved over a 10-year lifecycle**

These results exclude hardware ROI, which typically pays back in **less than 12 months.**

Security Advantages of CDI LTE OOBM

CDI is the only OOBM manufacturer offering:

- **FIPS 140-3 validated encryption**
- **Hardware and firmware developed and built in the U.S.**
- **Private APN routing that never touches the public Internet**
- **Static-IP secure transport**

This architecture ensures compliance with:

- U.S. Federal Government and DoD
- FISMA High and Moderate systems
- Financial services regulatory frameworks
- Utilities and transportation critical infrastructure standards

The transition from POTS to LTE is not just financial—it is a significant security upgrade.

Operational Guidance for Migrating from POTS to LTE

To ensure a successful transition, CDI recommends:

- **Validate LTE signal strength** at each location.
  - If a mobile device can load a web page at the install point, OOBM will work.
- **Use private static IP addressing** for all OOBM endpoints.
- **Leverage carrier-grade private APNs** instead of the public Internet.
- **Plan for a 12–18 month ROI** on hardware investment.
- **Consider dual-SIM or dual-carrier redundancy** for high-availability environments.

Given the 10+ year lifespan of CDI hardware, the long-term benefits are substantial.

Conclusions

The retirement of analog POTS circuits has made legacy OOBM architectures increasingly expensive, unreliable, and unsustainable. LTE-based OOBM from CDI provides a modern, secure, and cost-efficient solution that:

- Reduces OOBM transport cost by **over 92%**
- Saves **$1.11 million per year** at 500 locations
- Eliminates dependency on failing copper infrastructure
- Enhances security through **FIPS 140-3 validated cryptography**
- Delivers greater uptime and operational independence

For organizations with distributed infrastructure, the financial and security advantages of CDI LTE are immediate, measurable, and impossible to ignore.

Communication Devices, Inc.

Contact CDI Sales for Further Information:
sales@commdevices.com
1-800-359-8561

www.commdevices.com