

CASE STUDY: CivilGEO

In Brief

Industry

- Engineering

Challenge

- VOIP and Video Conferencing system was suffering from dropped calls, lower call quality, echos, hissing and gaps in conversation caused by ISP problems

Solution

- VOIP Armor™ solution by Mushroom Networks

Benefits

- Solves VOIP and VC reliability and call quality problems
- Various ISP connections are orchestrated for best VOIP and VC performance with reduced Internet cost
- Can replace expensive MPLS
- Increases simultaneous VOIP call capacity by combining WANs
- Increases corporate image towards clients and partners and helps protect productivity



CivilGEO solved their phone systems call quality and reliability problems once and for all, with VOIP Armor™

CivilGEO is fanatical about building engineering tools that help civil engineers complete their work more quickly and accurately. Their team is composed of passionate and capable civil engineers and software developers set out to fill the gap that engineers face on a daily basis. Having multiple locations worldwide, CivilGEO's operations heavily rely on phone and video conferencing tools, both within their team, as well as with their clients for sales and support.

Challenge: On-going voice quality and call reliability problems with their VOIP solution, as well as their VC (Video Conferencing) was impacting their daily operations

"You can lose power a few times a day during the monsoon season in our Delhi office and that means all of our 3 ISPs can suffer some outage or performance degradation", says Chris Maeder, the Engineering Director at CivilGEO. "Before VOIP Armor from Mushroom Networks, that meant, our phones were frequently down. We have a Spectranet, an Airtel and one Tata Internet service in our India office. Even during normal times, their performance would fluctuate for various reasons, making our VOIP based phone system and our HD Video Conferencing system useless for our engineering and sales teams".

Common fluctuations in the ISP network connectivity, including high latency, jitter, packet loss, cross traffic, backbone congestion and many other factors directly impact voice quality of VOIP (Voice over IP) as well as IP based VC (Video Conferencing) systems. Such fluctuations in the ISP link can be transient or long lived; and certainly are unpredictable. This means the VOIP system will experience hissing, crackling, echo or gaps in conversation or even dropped calls if it relies on a single ISP connection, no matter the SLAs promised by the ISP.

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"Now after VOIP Armor, we can't even notice if one of our ISPs is down or having network issues, we can't even notice it during our calls. Our VOIP phone calls are crystal clear and calls never drop. It's just solid, it's great, I can't say enough about it."

*Chris Maeder
Engineering Director, CivilGEO*

Solution:

Chris Maeder from CivilGEO describes, "we have a hosted VOIP solution from 8x8 and we also rely on video conferencing systems. They all work great when you have a flawless network, which is never the case. We tried to solve our phone problems for a while now, we tried Barracuda Networks, we tried Cisco and few others with no success. Then someone recommended Mushroom Networks, we said 'funny name', but let's try Mushroom Networks, and, oh man, does this technology work. It is seamless, you plug it and it just works. Now after VOIP Armor, we can't even notice if one of our ISPs is down or having network issues, we can't even notice it during our calls. Our VOIP phone calls are crystal clear and calls never drop. It's just solid, it's great, I can't say enough about it".

VOIP Armor is based on Mushroom Networks Software Defined WAN Orchestration technology. Available both as a hardware appliance, as well as a module in Mushroom's Truffle product line, VOIP Armor intelligently manages 2 or more ISP links and routes VOIP packets around networking problems. VOIP Armor orchestrates 2 or more ISP links, measures Internet line conditions in real-time including parameters such as packet loss, latency, and jitter among others and makes real-time routing decisions on a per packet basis. This means VOIP packets traverse the optimum path at any given point in time. This results in zero dropped calls, no more hissing, crackling, echo artefacts or gaps in conversations. VOIP Armor squeezes the best MOS (Mean Opinion Score) out of the network for optimum VOIP / SIP performance.

With VOIP Armor, CivilGEO was able to boost the reliability and video quality of the HD video conferencing system as well.

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"...oh man, does this technology work. It is seamless, you plug it in and it just works..."

*Chris Maeder
Engineering Director, CivilGEO*

Benefits:

Phone call conversations are an important part of the corporate image towards partners, clients and the outside world. Calls are also an important part of internal corporate communication. Quality issues and down times can be directly connected to loss in productivity and will impact the company bottom-line.

"VOIP Armor really made the difference. People on the other side of the call say that we sound as if we are calling from a room next door, even though we call from our India office", adds Chris Maeder.

VOIP Armor designed to solve VOIP issues via leveraging 2 or more WAN connections, not only boosts VOIP performance and reliability, but it also provides cost savings compared to expensive MPLS links. VOIP Armor can be used to either augment MPLS lines with additional cost effective broadband lines, or can be used to replace existing MPLS to reduce operating expenses.

VOIP Armor intelligently combines ISP links for VOIP traffic and therefore increases the simultaneous call capacity. The ISP links used for the VOIP/SIP traffic do not need to be dedicated to VOIP, as the technology is smart enough to route around any network problems including cross-traffic in the network.

Benefits of VOIP Armor extend to real-time Video Conferencing as well, where HD quality video with high frame-rates can be achieved over bonded broadband connections even during performance fluctuations of the ISP lines.

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Summary

CivilGEO provides engineering tools that help civil engineers complete their work more quickly and accurately. CivilGEO tried various options, before deciding on VOIP Armor by Mushroom Networks, to solve their VOIP quality and reliability problems. Once VOIP Armor was installed, their VOIP system became extremely reliable and voice quality of their hosted VOIP system became flawless. Similarly, their HD Video Conferencing solution can now sustain high-definition and high-frame-rate video conferencing over the bonded broadband connections.

About Mushroom Networks, Inc
Mushroom Networks is a San Diego, California-based company with the mission to provide innovative networking solutions. Our products and services are focused on a range of networking solutions for enterprises and small/medium sized businesses in various industries. Our solutions bridge the technology gap to the future by enabling applications today, that are otherwise not possible. Mushroom Networks was founded in 2004 as a spin-off from the University of California at San Diego. Mushroom Networks' products are based on the unique and patented Broadband Bonding® technology developed by our engineering team through extensive research & development.

Mushroom Networks Product & Technology Awards:

