



AAC VIDEO TELECONFERENCING, AUDIO VISUAL & MEDIA OPERATIONS

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INTRODUCTION

In today's mission-critical driven landscape, communication is more than just connectivity—it is a strategic enabler of operational success. AAC empowers government agencies with integrated solutions that go beyond traditional teleconferencing. In this white paper, AAC outlines comprehensive capabilities for resilient audio visual and video teleconferencing systems support and highlights emerging technologies designed to meet the evolving demands of mission critical environments.

OVERVIEW OF AAC AND OUR CAPABILITIES

AAC is a recognized leader in mission-critical communications, delivering integrated solutions that support secure collaboration for several federal agencies' enterprise environments. Our capabilities encompass video teleconferencing (VTC), audiovisual (AV) multimedia productions, public outreach conferences, and hybrid meeting support.

AAC brings cohesion to fragmented communications ecosystems by consolidating infrastructure network operations, VTC systems, and AV services under one integrated framework. We consider the design, implementation, and maintenance of the entire ecosystem required for resilient communications—security and compliance, cloud migrations and modernization, server and networking infrastructure, conference room configuration and standardization, including AV equipment, power, and environmental control systems. Figure 1 depicts AAC's AV and VTC capabilities.



Figure 1: AAC A/V and VTC Capabilities

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With over 35 years of continuous support to federal agencies including the National Library of Medicine (NLM), Consumer Financial Protection Board (CFPB), Federal Communications Commission (FCC), and the United States Navy, we bring unmatched continuity, deep institutional knowledge and a clear understanding of the agency's infrastructure and mission priorities.

VIDEO TELECONFERENCING SERVICES

AAC continues to drive the modernization and innovation of video teleconferencing and unified communications platforms across the federal enterprise. Our approach fuses technical excellence, secure design principles, and cloud native scalability to deliver reliable user centric services that meet the demands of mission critical collaboration. Through proactive AV and IT integration, hybrid meeting enablement, and continual infrastructure enhancements, AAC ensures that video communications are responsive, resilient, and engineered for tomorrow's challenges. For one defense customer, AAC personnel provided support for more than 3,000 real-time secure collaboration sessions leveraging an NSA-approved Type 1 encryption device to conduct secure multi-party and business critical engagements totaling more than 6,000 hours of operational communications across complex environments.

MODERNIZATION AND CLOUD TRANSFORMATION

AAC led the modernization of multiple enterprise-wide video teleconferencing environments by standardizing hardware and enabling seamless interoperability with Microsoft Teams. Over 50 VTC enabled rooms across multiple facilities have been upgraded with next generation A/V solutions and are centrally managed, providing secure, cloud-based oversight and streamlined configuration. AAC also successfully transitioned legacy on premises VTC infrastructure to a secure scalable cloud back end enabling faster feature deployment, seamless updates, and enhanced system resilience. In addition, legacy video archives were migrated from legacy systems to a modern linear tape open LTO storage, ensuring long term media preservation, rapid retrieval, backup and disaster recovery, and decommissioning of obsolete hardware.

MEDIA PRODUCTION STUDIO MODERNIZATION

AAC has elevated multimedia capabilities to an enterprise-grade production standard. Through the buildout and operationalization of modern flexible studio environments, we enabled the creation of professional webinars, virtual training sessions, podcasts, and live events. These studios feature climate controls, soundproofing, dedicated production hardware, and specialized video editing workstations.

Our media engineers identify solutions and deliver advanced AV edit suites including procurement, installation, equipment configuration, and workflow optimization across the production floor to ensure smooth operations. We support high-visibility events, hybrid conferences, and live broadcast events with full planning, engineering, multi-camera switching, signal routing, and high-definition post-production services.

SECURITY AND COMPLIANCE

AAC secures all VTC and AV environments through a robust enterprise grade cybersecurity architecture aligned with federal requirements including NIST 800-53 (security and privacy controls), FIPS140-2 (federal cryptographic standards) and NIST (SP) 800-207 (zero trust architecture). We centrally manage identity and access controls and continually reinforce compliance through policy-based enforcement. Using auditing and threat detection tools, our security posture ensures that the VTC infrastructure is not only resilient and compliant but also trusted for high-consequence government use. In addition, AAC integrates NSA-approved Type 1 encryption technologies including KIV series cryptographic devices to protect sensitive communications as needed.

DEDICATED CUSTOMER SUPPORT AND USER TRAINING

Beyond the infrastructure, AAC provides dedicated A/V and VTC customer support through a responsive service desk and expert onsite teams. We manage the full equipment lifecycle, including procurement, vendor competition, inspection, deployment, and asset tracking. We develop and deliver comprehensive training materials and conduct targeted training sessions to ensure end users and administrators are fully empowered.

EMERGING VTC TECHNOLOGIES

AAC is committed to delivering next-generation VTC capabilities that anticipate the needs of forward-deployed, high-security, and compliance-driven environments. Our innovation roadmap includes applied AI, edge computing, and immersive technologies to improve mission outcomes while safeguarding data, reducing travel, and increasing operational reach.

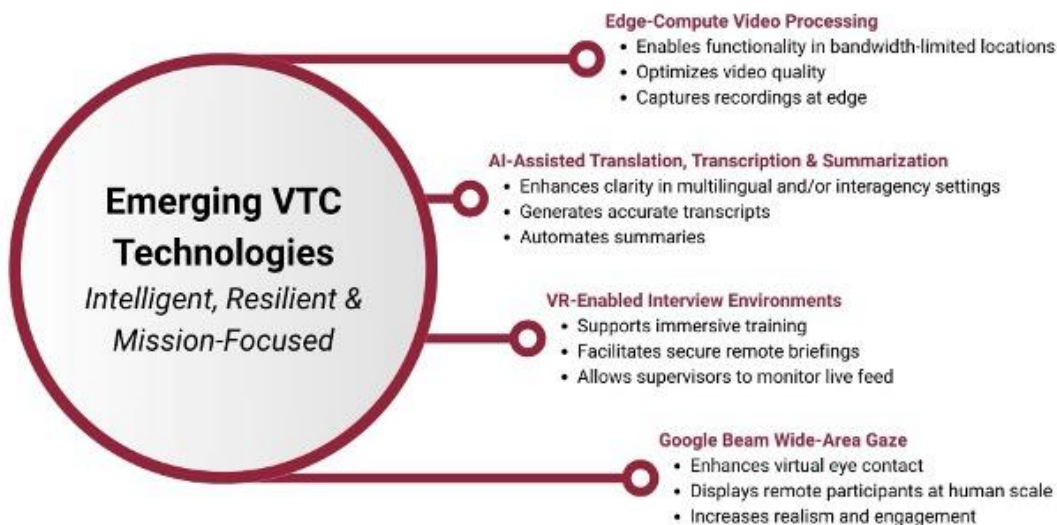


Figure 2 - AAC's Innovations

AI-ASSISTED TRANSLATION, TRANSCRIPTION, AND SUMMARIZATION

Federal agencies often operate in multilingual and geographically dispersed environments, where clear and timely communication is essential for decision-making, public engagement, and the creation of accurate, evidence-ready records that support long-term accountability and mission continuity. Traditional approaches to translation and note-taking can slow response times, introduce errors, and increase administrative burden.

Using FedRAMP-authorized platforms such as Microsoft Azure AI services or Google AI services, federal agencies can enable real-time transcription and translation during interviews, public briefings, or internal webinars, automatically generating accurate multilingual subtitles. These platforms generate dual-language transcripts with speaker identification and the ability to flag uncertain phrases for review. Smart summarization features extract key decisions, action items, and dates with outputs that integrate directly into case management or ticketing systems. In addition to improving accessibility and accelerating documentation, these tools enhance the accuracy and reliability of recordings and transcripts, making them suitable for legal, compliance, and investigative use.

EDGE-COMPUTE VIDEO OPTIMIZATION

Maintaining high-quality VTC capabilities in remote, low-bandwidth, or tactically constrained environments, presents a persistent challenge for federal agencies. Traditional platforms that rely on centralized video processing, whether in cloud or enterprise data centers, are prone to latency, video degradation, and dropped connections when operating over constrained or intermittent networks.

Using compact, ruggedized hardware platforms such as NVIDIA Jetson for real time video enhancement, AWS Snowball Edge for scalable field-deployable compute and Intel Movidius for low-power AI workloads, federal agencies can perform on-site video compression, frame enhancement, and noise reduction at the edge of the network. In addition, adaptive streaming protocols dynamically adjust resolution and bitrate, prioritize critical visual elements such as facial expression and defer non-essential data uploads until higher bandwidth becomes available.

VIRTUAL REALITY-ENABLED TRAINING AND REMOTE PRESENCE

As agencies confront increasingly complex operational environments, virtual reality (VR) technologies offer scalable, secure solutions for training, collaboration, and real-time oversight. Advanced platforms such as InVeris SRCE, and HTX Labs EMPACT, support interactive training modules where personnel can rehearse scenarios using AI-powered avatars that simulate culturally specific behaviors, emotional cues, and high-stress interactions. These immersive simulations reduce the need for large-scale physical setups while improving readiness and situational awareness.

Secure, virtual briefing rooms enable geographically dispersed leadership to collaborate in immersive 3D environments using VR headsets or desktop clients. Integrated 360-degree camera

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systems paired with VR visualization tools allow supervisors to monitor sensitive field interviews or operational activities, either live or via recorded playback, without requiring physical presence. This approach enhances situational awareness, protects personnel, and strengthens accountability in high-risk settings.

Result: Immersive, scalable environments for secure training, virtual collaboration, and oversight.

ZERO-TOUCH VTC WITH GOOGLE BEAM

Google Beam—evolving from the pioneering Project Starline, transforms remote meetings into immersive, face-to-face interactions using AI-powered volumetric video and light-field rendering. Traditional video calls often lack the depth and nuance of in-person interaction. Beam addresses this by presenting participants in realistic 3D, preserving eye contact and capturing subtle gestures. For federal agencies, this means a more human and engaging experience during high-level briefings, interagency coordination, and sensitive remote interviews—where clarity, presence, and mutual understanding are essential.

Integrated presence detection allows users to walk into a room and seamlessly continue an active Google Meet session on the Beam display without needing cables, login panels, or manual setup. The system also supports real-time translation and spatial audio, allowing geographically dispersed teams and multilingual participants to communicate naturally and effectively.

CONCLUSION

AAC remains committed to delivering secure, scalable, and forward-looking video teleconferencing solutions that evolve with mission demands. Our legacy of excellence, combined with our drive to innovate, ensures that our partners benefit from a communication infrastructure that is resilient, intelligent, and ready for the challenges of tomorrow.