



# VCC REMOTE REPORT

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## **Report Findings:**

New management technology for video remotes drives significant change across TV News production, *making industry leader's IP remote process four times faster.*

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# INTRODUCTION

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## Newsroom Remote Production

In recent years, TV Newsrooms across the country have had to battle for viewership and journalistic authority against a growing and powerful social media environment in which virtually anyone can portray themselves as an expert.

Newsrooms need rapid access to journalists and experts to explain complex issues and build credibility with the audience. That requires immediate connections with an extensive network of specialists around the world to create compelling content and more of it. It also means delivering these sources to air without freeze, breakup, delay, or dropped connections that disrespect the contributor, the talent, and the viewer, destroying the very credibility that is desired.

To succeed, TV news organizations need technology and workflows that reduce time to air for contributors, reduce complexity for contributors and production staff in bringing them to air, and, subsequently, allow more contributors on air in a condensed time frame. Speed is everything. News even a few hours old is likely to become irrelevant.

Along with encouraging creative techniques in news reporting, newsroom leaders must also worry about their organization's ability to harness creativity when long hours and the increased complexity of production have added to pressures on staff. Video remotes expand the storytelling opportunity but are only effective if they work within newsroom time, staffing, and budget constraints, and are shared across all production locations regardless of time or distribution method.

This paper explores how one major cable news organization adopted new techniques to meet these challenges across their networks. **They have dramatically reduced time to air, increased the number of remotes they can support daily to enhance storytelling, consistently created more content, and streamlined operations to reduce staff burdens.**



# BACKGROUND

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## Legacy Processes and Challenges

A VCC cable news client that supports several networks across different genres does more than 20,000 IP remotes per year. Creating remotes from smartphones and laptops can be challenging because there is no "technician" on the remote end. The contributor is also the crew. To get a good quality connection, the client takes advantage of a pre-remote test call to assess the device and connectivity before the shoot.

The client has used other technology including Skype TX boxes to capture remotes over the past few years. These live and taped remotes are substantially more cost-effective than sending a crew or transporting the contributor to a studio.

Initially the volume of these calls was manageable, but as COVID-19 became endemic, the quantities of IP remotes exploded, with more and more contributors brought in remotely. That need has only expanded and become permanent as the benefits of doing these type of remotes has become apparent.

With volume growing, VCC's client broke the roles into two-departments: a pre-production team to make "test" calls and a transmission team to put guests on air in the control room. The pre-production team arranged test calls and worked to optimize contributor connections, download software and ensure logins and passwords were available. These test calls averaged 30+ minutes each, often taking 1-2 hours. As airtime approached, transmission took over making final connections for air.

These two functions were separated due to long prep time and unpredictable setups. Even with substantial effort, results were inconsistent.

**Difficulties included dropped connections, blocky video, audio sync issues, improper software downloaded (Skype business instead of Skype) and contributors not knowing usernames and passwords.** Team members had no method of sharing information about guest', devices, setups and statuses. As the volume exploded teams were overrun by the workload.

# METHODOLOGY

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## Evolving Collaboration

VCC began working with our client in July of 2021 to collaboratively improve their IP remote process with the goals of 1) reducing time to air; 2) minimizing complexity for staff and gaining cost efficiency; 3) increasing the ability to create compelling content, and more of it; and 4) simplifying use by contributors.

VCC provided its AirFirst™ caller management software platform for an initial three-month test period. VCC developed this platform to support its own “Caller Cloud” production-services clients for the past eight years, and it has brought substantial workflow advantages. In addition to software, VCC provided the news client with training, support services, and hardware. VCC and the client collaborated with weekly meetings and frequent software enhancements to improve and optimize the operation.

During the test period, systems were used on-air in support of the client’s multiple channels, connecting about 25% of their overall IP remote volume. The trial was extended, and the AirFirst platform has now been in use for more than a year.

Two testing periods (July 2021 and April 2022) were established to quantify the results as related to the stated goals. The table provides top-level data for the testing periods.

**Table 1: Remotes in Study**

Study Dates	7/20-9/21 2021	4/4- 5/6 2022
Test Calls	460	324
Air Calls	482	611
Total Connections	942	935
Days in Study	63	32
Avg Test Calls/Day	7.3	10.1
Avg Air Calls/Day	7.6	19.0
Unique Contributors	468	557
Unique Contributors/day	7.4	17.4

# FINDINGS

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## Reduced Time to Air

In many ways, speed is the ultimate currency in news gathering today. With so many competing outlets, there has never been a greater premium on breaking a story or providing critical analysis and context to events. That means getting contributors to air efficiently and quickly.

VCC measurements made in the first testing period revealed substantial improvements in execution times, and identified further opportunities for improvement. Median times for each test call were immediately reduced from more than 30 minutes to less than 10. VCC and its client collaborated weekly on the team's performance and to create workflow improvements. The test was extended, and VCC added requested features.

### Test Call Team

The test-call team prepared contributors for their on-air appearances by establishing pre-production remotes. The test calls were used to ensure the contributors' own devices and internet connections were sufficient to create a quality connection, to setup framing, lighting, and audio quality, to train the guest on what will happen during their appearance and to gather information to be handed off to the transmission team.

Before using VCC, our client reported that typical test calls using Skype took 30 minutes or more, with many calls taking as much as 2 hours. Loading software, finding usernames and passwords, or incompatibility with Skype for Business were frequently cited reasons for the long durations.

The introduction of VCC's AirFirst™ platform to the client's workflow significantly improved operational efficiency within the IP remote testing team, reducing the mean time spent preparing guests for air from 30 minutes or more, all the way down to 7.1 minutes.

# FINDINGS CONTINUED

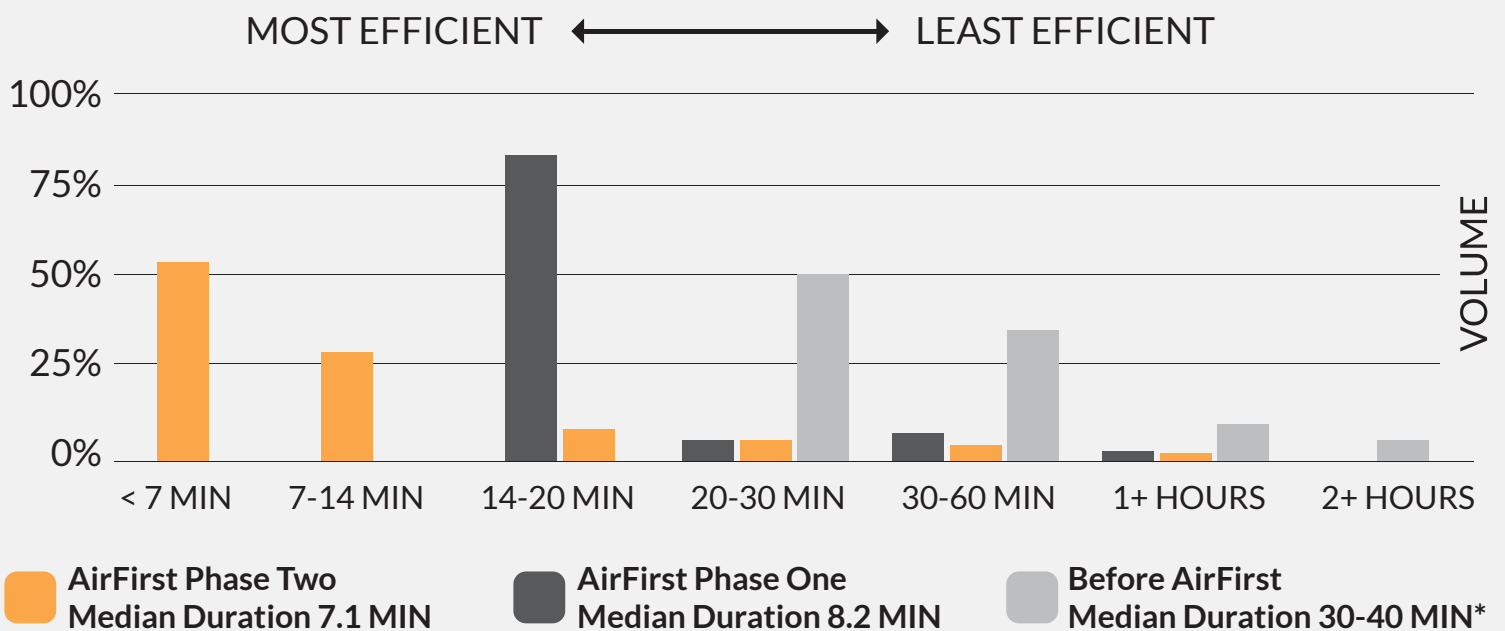
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## Reduced Time to Air

The chart below compares duration of test calls before using AirFirst and during the two measurement periods. During the initial use of the platform, the chart shows immediate process improvement from around 50% of test calls being done in ½ hour or less, to 90%. This increased to 95% in the second study period.

Median duration also decreased substantially with initial implementation of the AirFirst platform from more than 30 minutes to 8.2. Again, additional improvements were made during the second study period, bringing the median down to 7.1 minutes. Of extra importance, outliers were greatly reduced indicating that the process is now under control.

Table 2: Test Call Duration



\* Measurement data before AirFirst is anecdotal. Direct measurements were not made.

# CONNECTION OPTIONS

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VCC's platform supports three native support applications to ensure compatibility across almost every tablet, computer and smartphone. The applications do not require download, username or password creation on the contributor end. The client's team sends a single link to the contributor, determines the ideal connection based on device and connectivity and can switch seamlessly between the applications without additional effort from the guest.



## FaceTime

FaceTime permits native connections on every Apple device with simple click to answer outgoing connections and high video and audio quality.



## VCC WebRTC

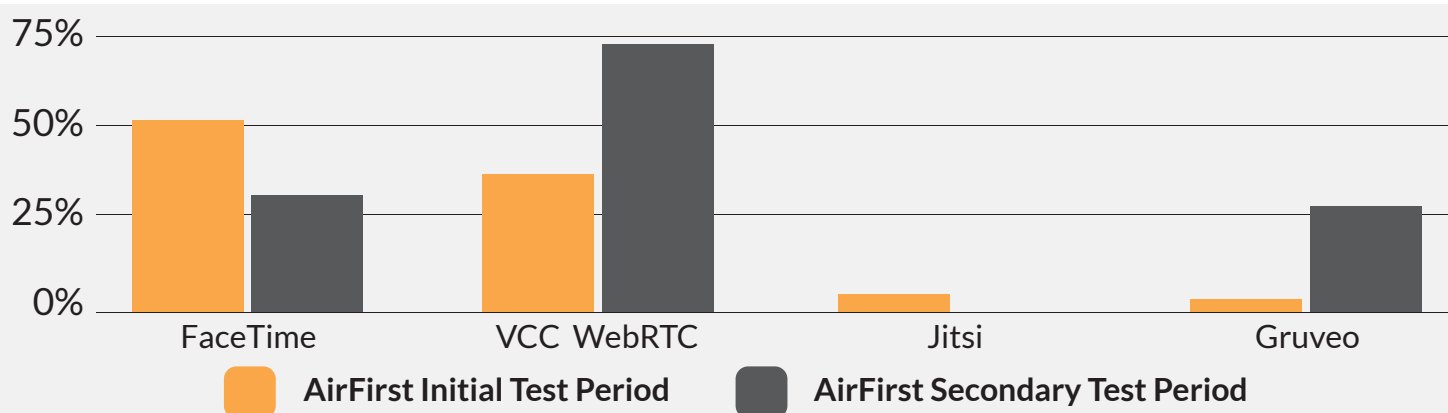
VCC WebRTC provides high video and audio quality and runs natively in many device browsers including those supported by Android and Windows. It adapts to a wide variety of bitrates and is constantly improved by VCC's engineering team. It includes a feature to output native 16:9 regardless of the aspect ratio of a contributor's device - a handy feature when guests rotate their smartphones.



## Gruveo

Gruveo provides a good quality connection in lower bandwidth conditions at somewhat lower resolution and tighter framing.

**Table 3: Test Call Application Usage**



\* Jitsi was removed from platform at the end of 2021

\*\* Totals > 100% because many test calls tried multiple apps to get the best quality



## TRANSMISSION PROCESS

- The transmission team establishes an air call with the contributor when instructed by the producer in the control room. Using the notes established by the test call team within the AirFirst platform, the transmission operator sends an appropriate "StageDoor" link to the contributor, establishes connection and executes final framing and quality control before handing the remote to the control room for air.
- Prior to AirFirst, the process to connect guests was marked by difficulties including **dropped connections**, **sometimes blocky video**, **poor audio synchronization** and **contributors not knowing their login names or passwords**.

## FLEXIBLE USE

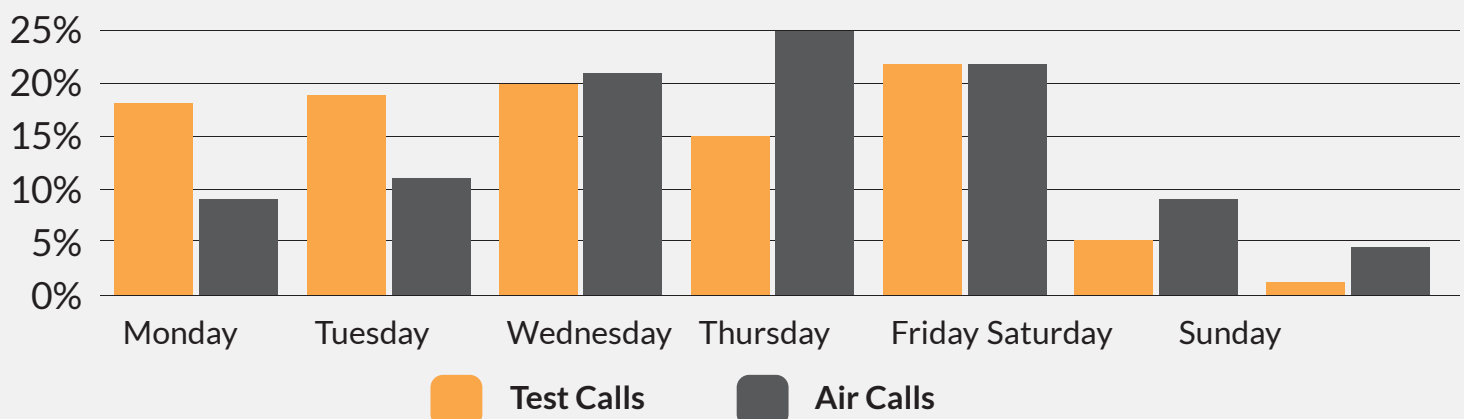
### Test Calls

- The shorter time needed to test call a guest using AirFirst leads to increased flexibility. Test calls can be initiated shortly before air hit-times leading to a majority of test calls made during the business week and a lighter load on weekends. Test calls can be scheduled at the most convenient time for guests and executed quickly.

### Air Calls

- Most air calls were executed by the client during the week with Wed-Fridays being the busiest and Sunday the lightest. Air calls are spread across the day with many in the early afternoon and prime time.

Table 4: Test & Air Calls by Day of Week



# IMPROVING OPERATIONS & CREATING EFFICIENCIES

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One of the biggest challenges in getting remote contributors on air has been the number of steps needed to execute a single remote. Add in the complexity of bringing several guests on at the same time and the process becomes even more time-consuming and difficult. Lastly, since the test-call team was largely working from home and the transmission team was in the broadcast facility, face to face discussion was made more difficult. Team communication is at a premium but lack of proper tools creates a complicated back-and-forth process taking up critical resources and time.

Prior to using AirFirst™, team members had no method of sharing information about guests or their setups. As the volume exploded during the pandemic, teams were overrun by the workload, but could not communicate efficiently about the status of each guest. After using AirFirst™ for nine months, our client not only improved connection speed and quality, but also improved communication between its team members.

## MAKING MORE COMPELLING CONTENT

Reduced complexity means more contributors make it to air during an industrywide demand for content. Contributor feedback is consistently positive about improvements and ease-of-use, making experts and VIPs more likely to make repeat appearances.

- Air calls per day **increased 267%** in the second test period
- Almost **42% of contributors went to air without a test call** in the second period (557 unique contributors and only 324 test calls) as the operations team confidence in high quality connections using the tools and information provided by AirFirst has increased.
- Volume has increased, nearly **doubling total connections per month** in the second period of the study

## CREATING EFFICIENCIES

Since connection times have been reduced and consistency improved, the organization could now consider other operational approaches to find efficiencies. With test call times consistently shorter, test calls can now be executed just before airtime

and the process can be seamlessly integrated into one operation. That combination is powerful. The customer has moved to combine the test call and air teams into one streamlined operational department. In many cases, only a single connection with the contributor before air is being used.

# CONCLUSIONS

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Using AirFirst the client was able to take a significant step forward in speed and convenience over the Skype process. Overall, the resulting process required less than 25% of the original time while providing improved control and reduced variability. Only 5% of test calls exceed a half-hour and a fraction of a percent reach a full hour. None of the test calls using AirFirst required two hours.

Once a process is under control it is possible to introduce additional efficiencies by combining functions.

- AirFirst has reduced execution time for remotes by 76-82% compared to the old process
  - The client's test call team is using AirFirst's support of multiple apps to handle a variety of devices and connection strengths
- The introduction of the StageDoor™ single link process along with Calendar events in early 2022 resulted in an additional test call time reduction of 1.1 minutes or 13.4% compared to the earlier test, reducing median time from 8.2 to 7.1 minutes.
- Transmission teams were able to launch 42% of their remote connections without needing test calls.
  - The most efficient test call is when none is required.
- Scaled to a full-year basis and used for 100% of remotes, the productivity improvements in the test call team's process alone would yield more than **10,000 hours of productivity, savings or cost avoidance of several hundred thousands of dollars.**
  - Combining the test call with the air-call permits these savings to compound further
- Using AirFirst had a favorable impact on coordination between members of different teams
- Qualitative feedback indicated that contributors preferred the simplified workflow.
- Use of the system resulted in improved on-air video and audio quality
- The client is deploying a consolidated operation to conduct the pre-call test and on-air functions
- Remote virtualized operations means that employees can operate the system from home and collaborate in establishing remotes in bureaus or remote offices.

# ABOUT AIRFIRST

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VCC has always believed that smartphones powered by 5G will be the future of newsgathering. Now it is rapidly becoming the volume leader in on-air appearances. The AirFirst™ platform has been in development for more than 7 years (long before the Covid-19 pandemic) and has helped VCC and its customers connect more than 30,000 remotes for air so far. Some of the key features include:



**Scheduling Engine & Contact Manager** coordinates efforts – A single platform for multiple departments permitting contact information and schedules to be easily shared and avoiding retyping and subsequent data entry errors.

**Real-Time 2 Way Connections** create intimacy – Applications supported by AirFirst™ all include support for return video and mix-minus IFB at low latency, permitting natural conversations between studio hosts and remote contributors.

**Browser-Based control** from anywhere – AirFirst™ can be operated from anywhere.

**Application agnostic** works with almost every consumer device – The platform currently supports three different ways of connecting with contributors, permitting test callers and transmission operators to match the connection method with the device capabilities and connection speed.

**Call Manager Pro™** speeds on-air calls – There's no need to position or resize windows, remove return windows, or set audio delays and levels. The AirFirst™ platform communicates with Call Manager Pro™ (CMP) software residing on the VCC provided endpoints to create a full-framed version of the connection, automatically removing chat windows and control buttons and managing lip-sync to provide a broadcast quality 1080i output.

# ABOUT AIRFIRST

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## Continued...

**StageDoor™** makes it simple for contributors – VCC's StageDoor feature permits a Call Producer to send a pre-composed text or email message to a contributor with a link. All the contributor needs to do is click the link; no user names or downloads are required. AirFirst identifies the type of device and recommends methods of connecting to the operator. A single button push then makes the connection, with first video in as little as 12 seconds.



**Connection Measurement** – Air First has a built-in connection measurement engine Tenaciti™ which gives the operator deep intelligence about a contributor's device and connection speed before connecting.

**Built-in Security** – AirFirst securely stores and encrypts Contributor information for management of PII and stores sensitive information separately from loggable actions. Information can be instantly forgotten by the system.

**Okta SSO support** provides security - AirFirst features single sign-in and permissions management through Okta.

**VCC Support** – VCC provides extensive operations and technical support. Since VCC's team uses the same platform, improvements are incorporated both into the software and the training materials. Instructors have the personal experience needed to assist the team.

**Feature Rich** – In addition to the functions currently used by our client, AirFirst supports audience participation (Caller Queue®) and multiple contributors on one screen (CrowdView™ with Bop™).



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