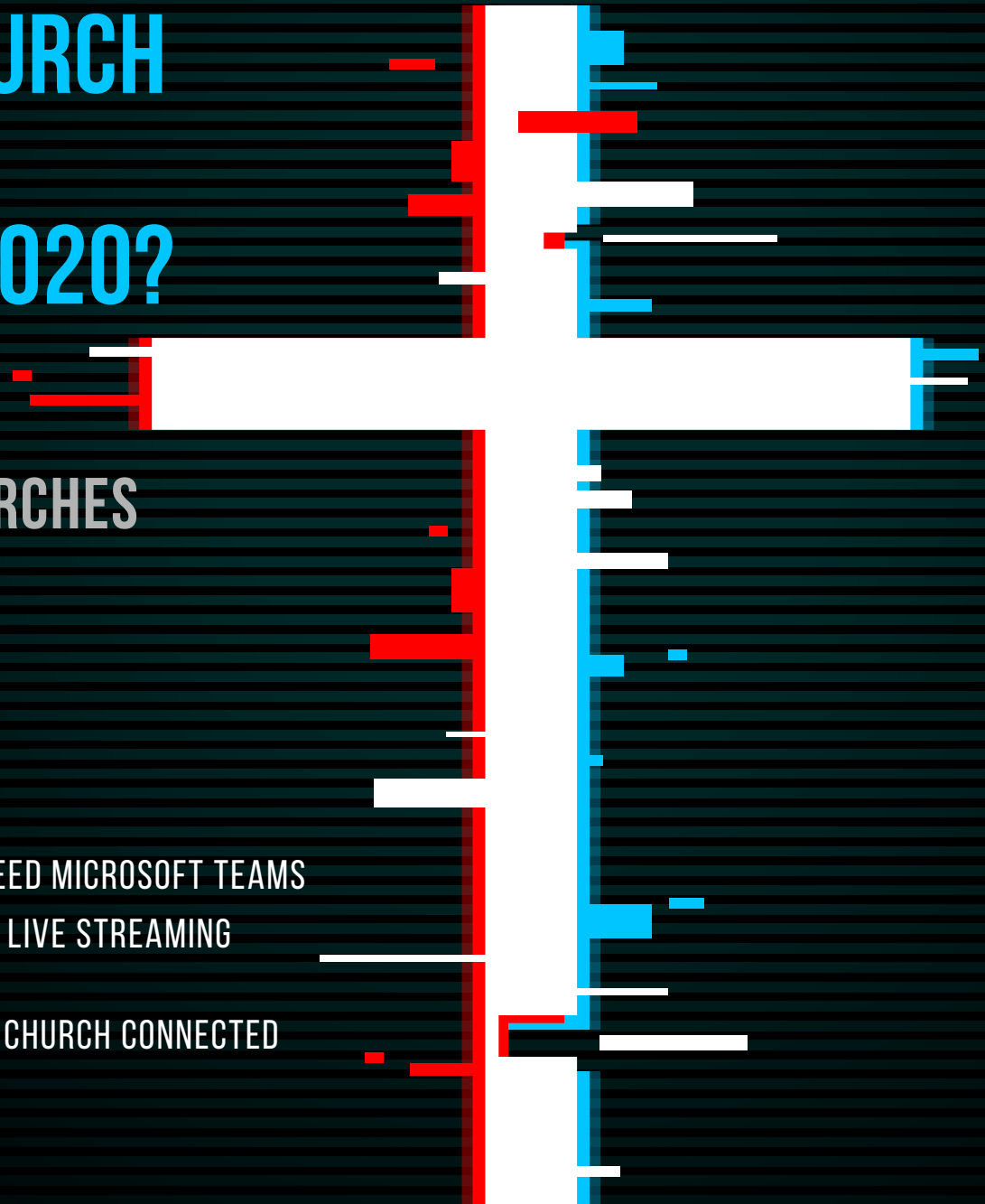# MinistryTech

Fall 2020

by CHURCHLEADERS

WHICH CHURCH TECH WILL SURVIVE 2020?

HOW COVID RESPONSE HAS RESHAPED CHURCHES

>> TOP 5 REASONS YOU NEED MICROSOFT TEAMS

>> THE ULTIMATE CHURCH LIVE STREAMING EQUIPMENT LIST

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Ray Hollenbach

THE SHAPE OF THINGS TO COME

Here's an interesting thought experiment: Suppose the Covid pandemic had hit the world in *1999*—how would the church have responded? What tools would we have used?

The answer is: We would have used whatever tools were at our disposal back then to help fulfill the mission. In fact, the mission wasn't different in 1999, or in 1899, or any other century. The church has always had the same calling: The Great Commission of making disciples, baptizing new believers, and teaching everyone how to obey everything God has commanded.

The point is that the church is a God-ordained, mission-driven entity. Our response 20 years ago would certainly have been different from a technological perspective, but not from a theological one: We *would* have responded! For two thousand years the church has responded to pandemics and natural disasters, to wars and famines, and to mind-numbing prosperity that can be just as deadly as disasters.

These "unprecedented" times (I'm so tired of hearing that word, aren't you?) have served to underscore two truths: (1) Our *mission* remains the same, and (2) our *methods* will always be subject to change. These are the great lessons of the Covid age.

In this issue of *MinistryTech Magazine* we continue to go about our business of highlighting the tools available to serve the mission. Forward-thinking churches are already beginning to consider which tech changes instituted in response to Covid should become a permanent part of our missional toolkit.

As always, in this issue we highlight some the great innovations and offerings developed by our advertising partners; and (also as always) we highlight the practical wisdom of our contributing columnists and contributors, who supply the necessary wisdom to apply the new gadgets and gear available.

Technological changes in the church are a lot like power-tools in the construction trade: It's possible to raise a barn *without* using electric or pneumatic tools of any kind (just ask our Amish brothers and sisters!). But the skillful and wise use of new technology can make the task easier and perhaps even better. And it's *also* true that power tools in foolish hands can do more harm than good. That's why we need sound counsel and biblical guidance, because what goes on *within* the church is far more important than the tools we use or the cathedrals we build. As the Psalmist said so many centuries ago, *"Unless the LORD builds the house, those who build it labor in vain"* (Psalm 127:1).

Ray Hollenbach is the Editor of MinistryTech *magazine. He has previously served as the editor of Outreach's* Better Preaching Update, *and as the editor of the Pastor channel at Churchleaders.com. You can reach him at* rhollenbach@outreach.com.

TECH CHECK

VIRTUAL SUNDAY SCHOOL, LIVE, FROM LONDON!

During these Covid days churches are—very cautiously—beginning to re-open, but children's church options (AKA *Sunday School*) have been severely limited. Yet creative solutions are beginning to emerge. Check out this YouTube channel specially developed by a British theater troop.

If you'd like to use *Virtual Sunday School* for your church (including in live streams, church websites or church services) you can download the video directly from: www.virtualsundayschooluk.com

SIX MASKS KIDS MIGHT ACTUALLY WEAR:

Perhaps your church is brave enough to actually venture into the world of Sunday School and is trying to provide in-person children's church ministry. First of all: *Good for you!* Second of all, you're definitely going to need masks for the little darlings. And you know our definition of 'Tech' is changing when the cutting-edge site Wired.com suggests a cloth-and-elastic solution designed especially for kids. Also, check out this fun collection of faith-based Covid masks for grown-ups, too.

HOW DO YOU MAKE A ROOM SAFE, QUICKLY?

Due to social-distance seating some churches are turning to multiple services in order to accommodate their entire congregation. If that's your church, check out the bundles offered from the people at Otarius, who make hand-held, battery-operated foggers for disinfecting at large.

They are ideal for Indoor, Outdoor, Garden, Hotel, Office, School and Dental Office use. A ULV Fogger generates fog to target air borne pathogens, bacteria that are invisible to the naked eye. Fogging machine atomization rate and flow can be adjusted accordingly to suit various disinfecting needs.

A new liturgy: say the benediction, go in peace, fog the room!

EDITOR'S NOTE: *Who can possibly keep up with all the tech options available these days? TECH CHECK highlights tech news and new gadgets that save you time, energy, money—and keep you from re-inventing the wheel. Have a hot tech tip or news item? Email rhollenbach@outreach.com.*

APPLE BEEFS UP PARENTAL CONTROLS
(KIND OF)

I've warned before about the new parental controls in iOS 13 and some of its challenges. As iOS continues to evolve so do the parental controls. While internet content filtering and accountability is still missing, Apple has continued to improve parental controls and made tremendous strides around communications and contacts. To be clear, I use an iPhone and so do my wife and kids. We also seem to have an abundance of iPads, Airpods and Apple Watches.

The parental controls now available in iOS 13 are primarily to help manage screen time and screen addiction issues. These controls can be leveraged to apply some restrictions and track usage. iOS 13.3 introduced more granular communication controls. Prior to iOS 13.3 you could enable or disable most communication tools but that was it. Messaging and texting were all or nothing implementations. iOS 13.3 allows you to control FaceTime, Messaging, Phone and Contacts.

One of the weaknesses prior to iOS 13.3 was that you could disable FaceTime, for example, and your child would not be able to call out, but if someone called your child, they would be able to answer. This loophole was quickly discovered by Facetiming children. iOS 13.3 closed that workaround. Now you can not only control time, but you can also control contacts.

This level of control permits you to allow your children to communicate with some, like family members, all the time, while limiting when they can contact their friends. You can even remotely add and remove contacts from your child's device. The caveat is it requires your child's contacts to all be in iCloud. I've found this to work well, although we did have to log out and log back into iCloud on one of the children's devices to get everything working properly.

Communication management is a great step forward for the parental controls on iOS devices. Apple's desire to help with screen time management and empower parents to utilize controls so they can teach their kids responsible device usage is admirable, and the fact that it is built into the software and iCloud without requiring a lot of thirty-party add-ons makes it easy.

The one feature missing is internet content filtering and accountability. While you can control content ratings for content consumed via Apple products and services, like iTunes, you cannot do the same for the internet in general. Currently your only web browser option on the device is to turn it off or on. While you can use network-based internet filters, such as those from your Internet Service Provider, or use a product like The Circle, it would be more convenient to have that built into iOS.

Jonathan Smith is the Director of Technology at Faith Ministries in Lafayette, IN, an author and frequent conference speaker. You can reach Jonathan at jsmith@faithlafayette.org and follow him on Twitter @JonathanESmith.

WORSHIP FIRST; TECHNICAL EXCELLENCE SECOND

One of the most fruitful worship leaders I know is a 58-year-old mediocre singer who's DEAF in one ear. He leads a racially diverse worship ministry of over 100 volunteers in a church of 2,500 people.

Another worship leader I know is 65. He's taken a very dated service to a well-done, technologically savvy worship expression with one of the best social streams I've seen. He rarely leads a song but has developed *dozens* of young worship leaders in a church of 500.

I know worship directors that *don't* play guitar or piano, yet they lead the whole worship ministry from a soundboard or drum set, in churches of more than 3,000 people!

Most senior leaders think too small when imagining their next worship leader. Their goals are typically someone young with exceptional stage presence, high anointing and low cost.

It's been my joy to help multiple churches find their next worship leader. I received probably 100 phone calls in the past five years, pastors asking for help to expand their idea of "I need a worship guy." What if I told you your next great worship leader would be a much better *worship pastor* than a *worship performer*? What if I told you they might do things that build God's kingdom in ways that don't translate well to YouTube or on live streaming? What if I told you they would need to be paid a significant living wage, but in return might produce disciples tenfold?

I appreciate that each church has a unique journey and this advice might be something for five or 10 years down the road. This very well might be the time you need a solid chief musician on stage, but consider the idea that the right person may not fit the persona of a typical worship leader.

Let me conclude my conclude my point with a not-so-unrealistic choice in hiring a worship leader:

Candidate A is an A+ stage-savvy worship leader. This person is anointed, brave, bold and a worker bee. Impressively, he or she makes the weekend "happen." This candidate knows all the latest tech. On the downside, they are prone to burnout or moving on to a bigger church.

Candidate B is a C+ stage-savvy worship leader that develops dozens of A-, B- and C-grade worship volunteers across all positions for years and decades. This person, too, makes the weekend "happen," but it's a little messier and the technical aspect sometimes breaks down. On the downside, this person may not be the hippest, and might wander off in order to plant a new church.

Who do you choose?

MIKE O'BRIEN

WORSHIP TEAM
DEVELOPMENT & TRAINING

Mike's ability to break down complex ideas into memorable phrases and move-forward practices is second-to-none. I wholeheartedly recommend that you have Mike in to work with you, your musicians, and your techs. You won't regret it; he carries the heart of worship deep within him — and it spills out everywhere."
— Dan Wilt

www.themikeo.com

Mike O'Brien *holds a B.A. in Music from Kennesaw State University and a Master's of Worship Studies from the Robert E. Webber Institute for Worship Studies. He has worked as a producer, engineer and mixer at Lucko Sound Studio, and with a collective of 25+ musicians called Poured Out Like Wine. Together, they produced seven albums with over 15 published songs with Vineyard Worship USA. He lives in Atlanta, GA, with his wife, Susan, and son, Ezekiel. You can reach Mike at* vineband@hotmail.com

WHO WOULD HAVE THOUGHT **POSTCARDS WOULD SURVIVE THE PANDEMIC?**

Church communicators have been some of the unsung heroes of the current pandemic crisis. With little notice and often no training, they've learned how to move ministries online, stream church services, and create digital bulletins and connection cards.

Many have also relearned the value of some non-digital tools of the past that along with these new tools will most likely last longer than the pandemic.

For me and for many others, one non-digital tool is postcards.

Why postcards and how have they become newly useful?

Our church, like most others, had to quickly figure out a way to get the service online and they did, but I wanted a more personal way to contact people, to encourage them, to let them know God loved them and was with them.

In the past, I often recommended postcards as a key outreach tool, but it had honestly been years since I'd done that. But during this time when people were isolated and I couldn't call them all, I remembered postcards. I'll briefly share what I did, and following that I'll share some links to what others have done with postcards.

My experience with postcards

I created the designs in Canva (www.canva.com) with the custom design size of ¼ of a sheet of 8 ½ x 11 in. paper. I then downloaded a jpg version and placed it into MS Publisher using the postcard template and printed them out on cardstock. (You can see the initial set here.)

I could have also used pre-perforated postcards from Avery (you can run through your home printer to create them).

I thought these would be useful, but I was amazed at the response—people I hadn't heard from personally in a long time contacted me, and I was especially happy to hear back from younger friends thanking me for them and telling me how encouraging they were. I've gotten far more responses from postcards than from any of the social media I've done and sent out, including social media where I used some of the same images.

How some others have used postcards during the pandemic

One community center created and sent out postcards and were so overwhelmed with the response, they have made it into a public display. They described it this way, "It absolutely has been a fantastic public outreach and a way to connect the whole community."

If people need help on how to write a postcard, here is a delightful article with the specifics of how to write a postcard by a poet. The title sums up his theme: "Postcards can ease pain of isolation during coronavirus pandemic, a quick personal note can mean a lot to those living alone to protect themselves from the virus."

One idea for a Children's Ministry use of postcards would be to look at this NPR project where they asked parents to send in postcards drawn by children during the pandemic. You can have your child draw a card directly on them, or you can draw an image, scan it into your computer, place it in a program such as MS Publisher in the postcard template, and print off a number of the postcards with your child's (or yours, you can do them also) drawing on them.

Here are ideas of what some professional artists are doing to create pandemic-themed postcards

Liz Malanaphy's delightful postcard designs—simple illustrations including her toilet paper doodle "Wishing you abundance and absorbency!"—are wonderful and fun.

For Liv Lane, a cancer survivor, receiving a postcard was very meaningful to her when she had to isolate due to cancer. With the pandemic restrictions, she realized many people might be in the same place and created this line of postcards.

A keeper communication piece

It seems odd that it took a pandemic to remind us once again of the power of postcards to communicate. They work as well as they do because when someone gets a postcard they typically totally focus on it and are alone when they read it. Remembering that reality is what makes postcards a powerful communication tool now and long after the pandemic is primarily a memory.

Yvon Prehn is the primary content creator for www.effectivechurchcom.com, a website that serves and equips church communicators to help them be successful in the incredible work they do in introducing people to Jesus and helping their churches grow in numbers and their people as disciples. The site does this by providing strategy to give them a biblical foundation and motivation and practical skills training to make them more effective church communicators.

# YES: EVEN DESIGNATED AUDIO/VIDEO/LIGHTING SYSTEMS NEED PROTECTION

I had the pleasure of speaking with a local worship pastor at a large church in the area. As we discussed the new challenges (and opportunities) brought about by the ever-changing COVID-19 landscape, the topic of antivirus software surfaced. If you have had any experience on a church tech team (or even if you have not), I am sure you can acknowledge the idea that it is possible for antivirus software to have an antagonistic effect on the performance of a system, even if while-at-the-same-time it is performing critical services.

Another example would be designated AVL (Audio/Video/Lighting) systems used by church tech teams, which elevate the worship experience but also utilize heavy resources. As my pastor friend explained to me, smaller churches may have systems multi-tasking but by-and-large, the resource strains on these systems are so heavy that most computers perform a single task. The example he gave for his church included utilizing three Mac mini's for video (ProPresenter), one Mac for recording (Pro Tools), another PC for running sound spectrum analysis, another PC simply for lighting, and finally a PC tasked for live-stream recording. Given these separate-but-critical-duties assigned to respective machines, I began to understand a tech team's temptation of forgoing protection on their systems against malware and cyberattacks with dedicated endpoint security software, simply because of the "extra weight" of the software, even if the purpose of such software could prove critical. There is a huge risk to "running without the layers on." Your church could catch a virus! But the day-to-day reality of time and resources limits us sometimes.

A related but separate topic that surfaces daily in my conversations and consults is whether Macs can even get a virus in the by-and-large-Apple-worship-team-world?

The technologically-archaic notion that Macs cannot get viruses is simply false. Macs **can and do** get infected with malware, and our *Thirtyseven4 Labs* have seen a significant increase in the past 18 months. Macs may (for several reasons) be less likely to become infected than their Windows counterparts, but documented cyberattacks on these platforms are numerous.

And to address the idea that if antivirus software is necessary it will hinder performance, I would like
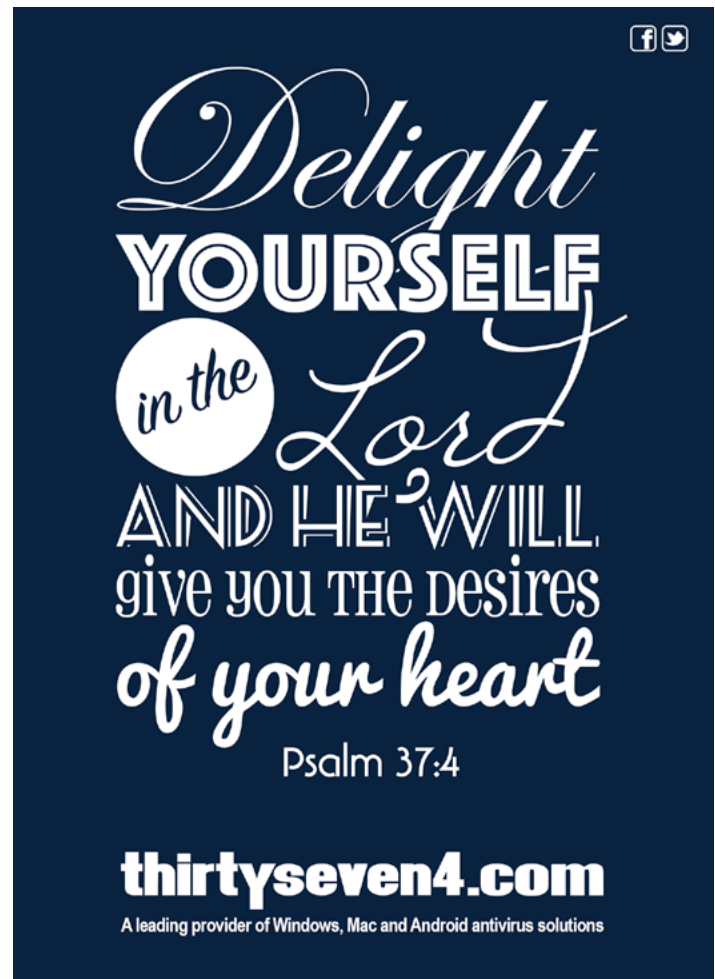
to counter that if properly installed and run, (trusted) antivirus software should have no effect or minimal effect on daily procedures. But grace should be given and appreciated to the overarching idea and *purpose* of ANTI-virus software—we must allow space/resources/time for it to *do its job.* With antivirus, as with life—there is no *completely* free lunch. But to run machines completely unprotected, even if operating at lightning speed, is careless and dangerous.

Due to the very nature of scanning, an AV scan can be a system-intensive activity. Running a thorough, full-system scan while utilizing AVL software during worship production is probably not the wisest idea. However, industry leading solutions like Thirtyseven4

do offer the flexibility of various scan types (thorough scans, quick scans, scheduled scans, file specific scans). The variety of scans allow systems to be proactively protected while offering the flexibility of scans to take place during off hours.

Another question, and (depending on your software) complaint that I receive is about antivirus updates and their impact on performance. Should we run updates containing the latest virus definitions? Yes. (Just like running outside in cold temps, there are proactive measures that are prudent to take in caring for our bodies. The same is true for our machines. The latest updates provide the most current protection.) Will it affect your performance? I would say that depends on your provider.

Endpoint security solutions handle virus definition updates differently. With Thirtyseven4, we offer our customers daily, compacted, incremental updates. These immediate updates allow the virus database files to remain small in nature so when the updates are automatically downloaded and applied they offer no noticeable hit to the system performance. The flexibility of scheduling updates during off hours is also a possibility.

Professionally speaking, the need for antivirus software (even in a Mac world) on production systems is a *necessity*. The threats are real, and cybercriminals are continually evolving their strategies to attack systems on a more manual, targeted basis. Unfortunately, AVL systems are not void from their hit list.

I prefer walking and running in the summer without being weighed down with layers of clothes needed in winter, but even during the hot months, I lather up on sunscreen or wear a hat to protect against the sun. Regardless of the season, there is always some type of necessary protection. And the same is true

with antivirus protection for our devices. Whether utilizing Macs or Windows machines, and regardless of changes in the safety landscape, I'd rather be minimally impacted and healthy, than vulnerable and in cyber danger.

Steven Sundermeier *is the owner of* Thirtyseven4, LLC, *a leading provider of antivirus/security software. With 17 years of experience in the cybersecurity field, he is one of the nation's leading experts in virus, malware and other threats. Before founding Thirtyseven4 in 2009, Steven worked in a number of roles in the antivirus industry dating back to 1999.*

HOW THE PANDEMIC HAS CHANGED CHURCH

Change Is Here to Stay

by Ray Hollenbach

Here we are—worldwide—in the ninth month of a worldwide pandemic. Economies have been shaken, social structures have been re-arranged, and worship gatherings have all been impacted deeply. And the end is not in sight: To be sure, a vaccine is not far away, but between manufacture and delivery, most of 2021 will still require changes in the way we have always done church. We should face it: We're never going back to the old normal. The technological question facing churches is now, what will be the *new* normal? What technological necessities are part of doing church even after the development of a Covid vaccine?

These questions are not new. The church has always used technology—from ink on papyrus, to stained-glass images, to Gutenberg's press, church liturgies and community life have leveraged whatever tech was available and affordable. In that sense nothing has changed at all, but forward-leaning churches should consider what technological changes will become a permanent part of the liturgy landscape, and how can we prepare? Here are three tech lessons we've already learned, and one thing that will never change.

> "GOD CARES ABOUT PEOPLE, NOT BUILDINGS OR TECH. JESUS DIDN'T GO TO THE CROSS FOR NATION-STATES, SOCIAL INSTITUTIONS, OR CORPORATIONS: HE BLED, DIED, AND ROSE AGAIN FOR PEOPLE."

EVERY CHURCH SHOULD HAVE (OR GET) A RELIABLE ISP

There was a time when no churches had telephones; then there was a time when all churches needed telephones; *and then* cellular technology rendered church land lines obsolete! Someday our ISPs will go the way of fax machines, but until the next big thing comes along, all churches need secure, steady and reliable access to the internet. Even the smallest country church benefits from world-wide connectivity. Sunday schools and nurseries need access; youth groups now seem irrelevant without the latest videos; and the folks who show up Sunday mornings (for good or for ill) expect your sanctuary to provide great Wi-Fi—for free.

LIVE STREAMING IS NOW A PERMANENT PART OF DOING CHURCH

At least among first-world churches, live streaming is here to stay, even after we can pack thousands into church facilities. Plenty of churches were live streaming before Covid went viral, but now *all* churches should.

Live streaming is a blessing to those who cannot—or choose not to—make it to a Sunday worship meeting. Older church members no longer need to be classified

as "shut-ins" because Sunday mornings can come to them. Young parents with sick babies can drink deep of praise, worship and teaching from the trusted source of their local congregation—if only the church will continue to make it available. Outreach will increasingly come to depend on visitors "sampling" your church online first, perhaps months before they would feel comfortable walking through your church door.

This means that the quick-fix temporary solutions for live streaming must be replaced by quality gear and great upload speeds. Does your church budget for 2021 include significant upgrades?

CHMS WILL CONTINUE TO GROW

Smaller churches can certainly keep track of their congregations without software, so why does every church need Church Management Software?

The newest versions of ChMS integrate text messaging technology that has become vital to any church that wants to quickly respond to any situation: bad weather, security concerns or communicating urgent needs church-wide.

ChMS has made giving easier and more regular. One of the sad lessons of the Covid lockdowns has been that churches who relied on put-your-offer-in-the-basket giving have seen significant declines in giving. Most ChMS packages include online giving and text-to-give. Almost everyone uses PayPal, Venmo or other financial service apps on their phone—why shouldn't the church be willing to receive their gifts in the manner they want to give them?

ONE THING THAT WILL NEVER CHANGE

God cares about people, not buildings or tech. Jesus didn't go to the cross for nation-states, social institutions or corporations: He bled, died and rose again for people. And the church is made up of people—that's the why God set the whole thing up! In a strange way, the Covid changes have helped bring us back to the foundational truth that we need each other. People have felt the loss of face-to-face fellowship, of handshakes and hugs, of looking others in the eye and saying, "You matter to God, and to me."

The rise of megachurches, broadcast churches and online churches has in some ways prioritized gadgets and gear over the shepherd and the sheep.

Nine months (and counting) of separation has reminded us that the church is not simply in the message distribution business: We are not "in business" at all. The church is how God wants to demonstrate his love for each and every soul he created. To the degree that we recover this truth, we will be able to pivot toward tech change, without experiencing the loss of our divinely-appointed calling and task. At the end of the age, God will not ask how many page views or streaming customers the church gained. He will ask, "Did you care for my sheep?"

Ray Hollenbach, a Chicagoan, writes about faith, tech and culture. He's the managing editor of MinistryTech magazine, and the author of Deeper Hope (and other books) available at Amazon.com. He currently lives in central Kentucky, which is filled with faith and culture, but not so much tech.

THE ULTIMATE CHURCH LIVE STREAMING EQUIPMENT LIST

Live Streaming Is Here to Stay

by Duke Taber

What type of **live streaming equipment** should you use for [church live streaming](#)? If you want to create a professional live stream, your smartphone won't provide the quality or features that you need. For pro video and sound, you need pro equipment including [cameras](#), [microphones](#), video switchers, and [audio mixers](#).

DECIDE WHAT TYPE OF CAMERAS AND MICS YOU NEED

The cameras and microphones that you use for your live steam directly impact the quality of the stream. If you use inferior cameras or mics, the mixers and software that you use may not provide much help.

There are several different types of cameras for professional **live streaming** and each has its own advantages. Your main choices for video cameras include:

- Smartphone cameras
- Consumer HD video cameras
- [Professional-quality consumer cameras](#)
- [DSLR video cameras](#)
- [Professional video cameras](#)
- Pan Tilt Zoom Cameras

The camera on your smartphone and the consumer HD video cameras offer the lowest-quality video, compared to the higher-end options. These cameras typically record in 720p or 1080p HD. While you can get clear video in properly lit settings, smartphone cameras and handheld HD cameras have small imaging chips, which limits the overall clarity and brilliance of the video.

Professional-quality consumer cameras may cost between $1,500 and $20,000 and offer larger imaging chips than the camera on your phone. They also include the features that you need for professional streams, including a wide assortment of video filters and the ability to change lenses. You can also find cameras in this category that include XLR inputs for connecting professional microphones.

The DSLR video cameras are high-quality digital photo cameras that allow you to record HD video. These cameras tend to feature better imaging compared to standard consumer HD video cameras. However, they do not include XLR inputs or any of the video settings available with high-end video cameras such as audio control, exposure settings and filters.

The final category of cameras includes video cameras used by studios, news stations and professional videographers. These cameras often start at $25,000 and may cost millions. They are typically out of reach for most individuals. However, there are many

companies that rent these cameras.

Along with a wide selection of video cameras, there are many types of microphones. While the cameras that you purchase likely have built-in mics, these mics cannot compare to a pro microphone.

Choosing a microphone depends on the setting. If you are recording music, you use a variety of microphones. For example, you may have dynamic microphones with large diaphragms for the singers along with multiple small diaphragm mics for the drums.

If you are recording a group of speakers or performers, you may prefer a microphone that is easier to conceal, such as a lapel mic. These microphones are compact and designed to clip onto a lapel or shirt collar.

Many lapel mics are also wireless, which allows performers to move around without cumbersome wires. However, the wireless lapel mic needs a wireless transmitter that delivers sound to the audio inputs on your audio mixer or video switcher.

Handheld mics are also suitable for live streaming when you do not need to conceal the mic on the speaker. For example, the speaker may use a handheld mic when interviewing guests or speaking to the public.

Similar to the lapel mics, a handheld wireless microphone is preferred for live streaming equipment unless you are remaining stationary. For example, if you are live streaming from a home studio or your living room, these wireless options may not be essential.

The bottom line is that professional-quality cameras and microphones are needed for a high-quality live video stream. The pro-grade video cameras offer a great value as they cost much less than the true professional video cameras and provide much better video quality compared to the camera on your phone.

The best mics include wireless handheld or lapel mics, especially when your performers or speakers need to remain mobile. The mics that you choose should

also provide superior sound compared to the built-in mics along with providing more sensitivity to prevent hisses and pops.

CHOOSE MIXERS FOR YOUR PROFESSIONAL STREAM

Along with cameras and mics, you need equipment to compile the video and audio for live broadcast. In most cases, you will need a vision mixer, audio mixer, and computer software. The mixers allow you to use multiple cameras and microphones while sending a single feed to the streaming platform.

Vision mixers are also called video switchers, hardware encoders or hardware switchers. They include multiple inputs for connecting more than one camera. The switcher plugs into your computer, allowing you to switch between cameras for your live stream.

Some of these devices even allow you to deliver video directly to your streaming platform, eliminating the need for separate software. These video switchers are often called hardware encoders as they can encode the video for live streaming.

You can even find video switchers with built-in audio mixers. With these all-in-one solutions, you do not need an audio mixer or computer software. You just need the switcher along with your cameras and mics.

Audio mixers are used in the same way as the video mixer. However, instead of mixing video inputs together, you are mixing audio inputs together. Using an audio mixer allows you to adjust the sound separately from the video. You also gain control of the levels of each mic.

There are two main types of audio mixers: analog and digital. The main difference between these mixers is that a digital mixer converts an analog signal to digital, allowing you to process the sound with various effects and equalizer settings before converting the signal back to analog.

With a digital mixer, you get a wider selection of special features, which is useful when you need to tweak the sound of a musical performance. However, you may not need these extra options for recording speech.

When using an audio mixer for live streaming, you may also need software on your computer to compile the video and audio unless you send the audio directly to one of the cameras or the video switcher.

Whether you choose analog or digital, you should pay attention to the number of inputs and channels

the mixer offers. Your microphones will connect to the inputs on the mixer, which should include microphone pre-amps for amplifying the mic signals.

If you plan to use four microphones, the audio mixer should have at least four inputs. If you want to adjust the sound of each mic individually, the mixer should also have at least four channels.

INSTALL VIDEO ENCODING SOFTWARE ON A COMPUTER

The final piece of equipment that you need for live streaming is encoding software. The software is needed for encoding the video for streaming on real-time messaging protocol (RTMP) platforms.

There are also platforms that do not require separate software, such as Facebook, YouTube Live, Instagram and Periscope. You may also skip the encoding software if you purchase a video switcher with hardware encoding. While many *streaming* platforms offer their own free software or include encoding in their app, the free options often have limited features.

The software that you choose should allow you to add audio and video from your mixers or directly from cameras connected to the video card on your

computer. You may even have the option of adding graphics, text and other effects.

The encoding software, video switcher and audio mixer all need to work with your computer. The software may need a minimum amount of memory, the video switcher may require a specific graphics card, and the audio mixer may need a quality sound card. Depending on the equipment that you choose, your computer may need some upgrades.

The cameras, mics, mixers and software are just the essential items that you need for a quality production. You may also require microphone stands, tripods, handheld camera stabilizers and extra lighting.
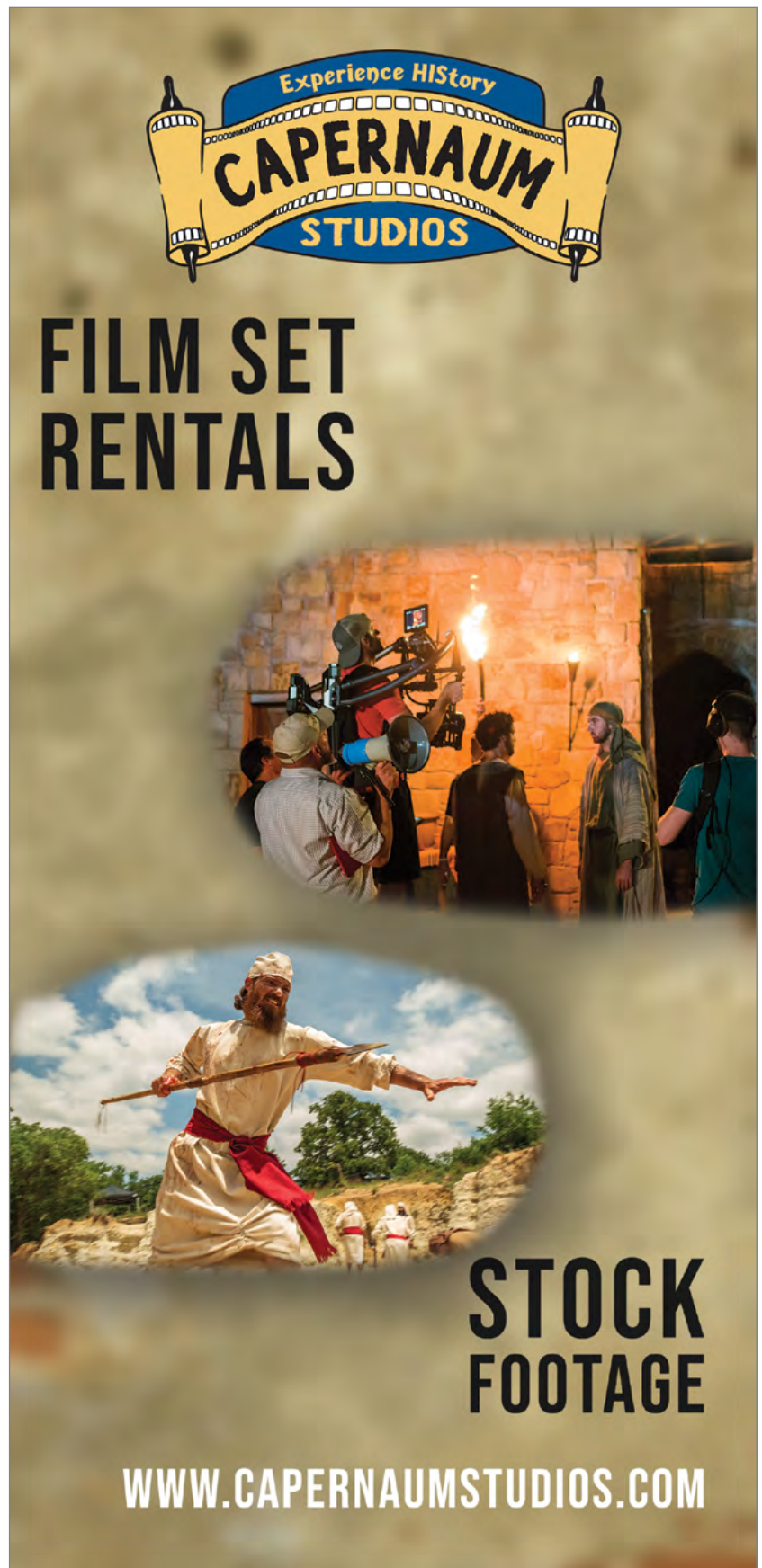
CONCLUSION: EXTRA EQUIPMENT

The equipment that you need for live streaming depends on the type of stream that you want to create. For the most basic video or music streams, you simply need one of the latest smartphones. If you want a professional-quality video or music stream, you may need pro cameras, mics, mixers and software.

The cameras and microphones are essential to a quality stream as they are responsible for recording the raw video and audio. The use of video switchers and audio mixers allows you to compile your video and audio for delivery to the encoding software on your computer.

Professional encoding software may include a variety of options that are not included when using the built-in features on Facebook and other social media sites. You may add graphics, titles and credits to your live stream. However, encoding software may not be needed if you purchase a video switcher with hardware encoding.

In the end, the equipment that you choose depends on your specific goals. If you want the *highest quality for your live stream*, *invest in professional equipment* starting with the cameras and mics.

Duke Taber, a church planter and tech genius, has three websites: Viral Believer, Easy Church Tech and Taber's Best Reviews. If you have a question or concern, contact him at dukums777@gmail.com.

TOP 5 REASONS WHY MICROSOFT TEAMS IS A MUST-HAVE TOOL FOR CHURCHES

by Scott Smith, President, Enable Ministry Partners

Microsoft Teams is the ultimate staff communication and collaboration hub. It contains everything you need for effective and efficient remote working. Your staff can chat, call, hold meetings, share documents, organize projects, share notes and so much more, all within a single intuitive platform. Teams provides the flexibility to manage your groups in any way you choose: by ministry department, by campus, by topic, by event, etc. You can customize Teams to fit your church and ministry precisely.

At Enable Ministry Partners, in our 20 years of serving churches, Microsoft Office 365 has emerged as the number one communication and collaboration platform for our church clients. Here are the top five reasons why our church clients love Microsoft Teams so much.

1. **It is FREE for all non-profit 501(c)(3) organizations.**
   Yep, you read that right! The E1 (or M365 Business Basic License) is free for all 501(c)(3) organizations. The E1 includes all of the essential features. Other add-ons come with additional costs.

2. **It is a cloud-based tool, perfect for both in-office *and* remote staff situations.**
   All application features are accessible from

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anywhere at any time. You can share and view files stored in the cloud through OneDrive and SharePoint features. *Teams* provides a secure and efficient way of sharing information, eliminating duplicate documents and staying organized.

3. **It makes hosting meetings a breeze.**
   In this "remote" world in which we're living, Teams helps you host virtual meetings with ease. From small groups and Bible Study meetings to virtual all-staff meetings, you can do it with Teams! During your meetings, enjoy features you love, such as chat, hand-raising for easy Q/A, screen sharing, customized backgrounds, etc.

4. **It makes engaging with volunteers easy.**
   You can create unique channels where your volunteers can engage and collaborate with your team. Use the message board feature to set up

public forums for your teams so they can make announcements or have discussions. In this video, one of our clients talks about the ways they successfully use Teams with their volunteers.

5. **It can act as your church's staff phone system.**
   Microsoft has provided multiple phone system options for your church. Gone are the days of landlines and work phones. You can easily use your own device to make calls inside or outside your organization.

BONUS REASON! (We couldn't help but come up with one more awesome reason.)

6. **It integrates with all other O365 tools.**
   Teams integrates with Outlook Email, Calendar, OneNote, Planner and so many more. For instance, you can seamlessly set up Teams meetings inside of Outlook, collaborate with multiple people (including volunteers) on documents using OneNote, use Planner to map out projects, assign tasks and make to-do lists, and more!

   Do you want to get your church started on Microsoft Office 365? We can help! We created an entire page on our website dedicated to Office 365 Resources, including how-to blogs, webinars and guides to all things Office 365. Whether you want to get Teams up and running or want to learn more about the multiple benefits of these tools, our O365 Resources page is a great place to start.

   If you'd like a little more help, we're here for you! We onboard and integrate Office 365 for our church clients all day, every day. Check us out at https://enableministry.com or email us at info@enable.email for information.

LIVESTREAMING PLUS CAPTIONING EQUALS DEEPER ENGAGEMENT

Reaching More People, More Effectively

USING CAPTIONING TO REACH YOUR FULL AUDIENCE

Technological advancements have made preaching the Gospel through new media easier than ever, and the limitations in place due to the COVID-19 pandemic have turned embracing these new technologies a necessity. A majority of the fastest-growing churches in the U.S. had already begun live-streaming their services as a way to grow, connecting with an audience that was not be able to physically attend due to distance, age or disability. Now, it's a scramble for *everyone* to get onboard with a solution.

But this new burden to adapt is a positive development. We are hearing a positive response from ministries that the newly implemented video stream services have not only provided an adequate solution for their congregation but have also gained exposure to more members of their community. This leads us to see a common trend among the churches that make *Outreach's 100 Fastest-Growing Churches in America* list every year: the skillful use of online services.

> THE SILVER LINING HERE IS THAT BEING FORCED TO FIND AN ONLINE SOLUTION HAS ALLOWED THE GOSPEL TO BE MORE ACCESSIBLE THAN EVER.

THE NEW NORMAL

Like nearly every institution in American life, places of worship have been hit hard by the novel coronavirus and subsequent social distancing measures. They've no longer been able to physically gather as one; to collectively nod their heads when a verse speaks to them or sway together during songs of worship.

State-to-state the laws vary, but here in California places of worship have been asked to "discontinue indoor singing and chanting activities and limit indoor attendance to 25 percent of building capacity or a maximum of 100 attendees, whichever is lower." And it's also encouraged to "consider practicing these activities through alternative methods (such as internet streaming)."

So amidst the uncertainty of how and when the regulations will change, religious leaders have turned to online platforms to practice their faith with community members. Since March of this year, BoxCast, the complete live video streaming solution popular among churches, experienced an 85 percent increase in active accounts and a 500 percent increase in viewing minutes compared to the same period last year. Even the modestly-sized church streaming platform streamingchurch.tv saw an immediate increase in their subscriber base of 20 percent and their total viewership triple to 60,000 weekly viewers.

Rick Warren from Saddleback Church reports that since the church moved to online-only services (26 weeks ago) they have more than doubled their 45,000-weekly attendance. This is their greatest growth in the shortest amount of time in their 40-year history.

The silver lining here is that being forced to find an online solution has allowed the Gospel to be more accessible than ever. And once the setup is in place to live-stream your services, keeping it as an option for your audience unable to attend in person even after all restrictions are lifted will be an invaluable resource for continued growth.

THE BENEFITS OF CAPTIONING

As audiences grow, it is important to point out that approximately 20 percent of American adults (48 million!) aged 18 and over report some trouble hearing. Some of the audience may be sitting in silence, literally.

Captions are words displayed on a television, computer, or mobile device, providing the speech or sound portion of a program or video via text. Captions allow viewers to follow the dialogue and the action of a program simultaneously. Captions can also provide information about who is speaking or about sound effects that might be important to understanding the message.

Captions help comprehension and clarification of the dialogue—and it's not just for those with hearing loss. Reading along with captions can help other members of the congregation with concentration and engagement.

After surveying a small sample of churches using captioning, we've seen similar responses where they've started by adding captioning to one service a week to gauge the response. Most find encouraging numbers with engagement on that service and move to add captions to the remaining services and even start captioning their *archived videos* of past sermons.

So as your audience grows, consider being further accessible with captioning and ensure you're reaching that additional 20 percent.

Aberdeen Broadcast Services'
foundation was built upon the desire to serve Christian ministries by helping their message reach a broader audience. For nearly 20 years, they have maintained a team of transcribers, caption editors and real-time captioners who are specially trained to deliver Christian captions at their best. Aberdeen can confidently say that they are the leading captioning service provider for Christian programming, captioning over 20,000 hours of content a year.

PANDEMIC OR NOT: 7 WAYS TO KEEP YOUR CHURCH CONNECTED

Texting is Here to Stay

For the past several months (that have actually felt like several years) most of the world has isolated themselves in their homes during the COVID-19 pandemic, eliminating some of the traditional forms of communicating and staying connected to the church. But a global medical crisis did not stop people from wanting to connect; the method of communication changed—it became normal to connect through video conferencing, email and text messaging.

There has been a massive uptick in the number of churches streaming services online (not to mention the number of people attending service in their pajamas!) and small groups gathering in Zoom rooms. Due to the instantaneous nature of text messaging, there's also been a significant increase in the number of text messages churches are sending in an effort to stay connected. Here are some of the great ways we've seen our church partners use texting to keep people connected with their ministry and each other:

TIP #1: LIVE SERVICE REMINDERS

Pro tip: Sending a quick reminder text an hour before your Sunday morning service will increase your viewership and engagement. Let people know what to expect during the live service and send a link directly to the stream. Receiving a direct reminder is a helpful and practical way for people to stay connected with your church anytime, but

> THERE'S BEEN A SIGNIFICANT INCREASE IN THE NUMBER OF TEXT MESSAGES CHURCHES ARE SENDING IN AN EFFORT TO STAY CONNECTED.

especially during a season when life seems a little less organized and structured.

TIP #2: IMPORTANT UPDATES & SERVICE NOTES

Communicating quickly and effectively is half the battle! Getting information directly to people instantaneously is always helpful, and people will find it reassuring to read important updates and see sermon notes before a message.

TIP #3: DAILY BIBLE READINGS

Remind people to hit the pause button once a day and spend time with God. Having a daily Bible reading or devotional program sent directly to each person's phone can help remind them to spend time in God's Word each day. Reading God's promises daily will help promote spiritual growth and maturity.

TIP #4: PRAYER REQUESTS

Lift them up! Provide a quick and simple way for people to send a prayer request to the church at

any time of the day or night. Help your pastors and team stay connected when connection matters most.

TIP #5: MOBILE OFFERINGS AND DONATIONS

If you are gathering in-person or virtually, you can receive contactless mobile donations quickly and safely via text messaging to help keep the church budget on track. Donors are able to send money from their phones with a one-time or repeat donation at any time.
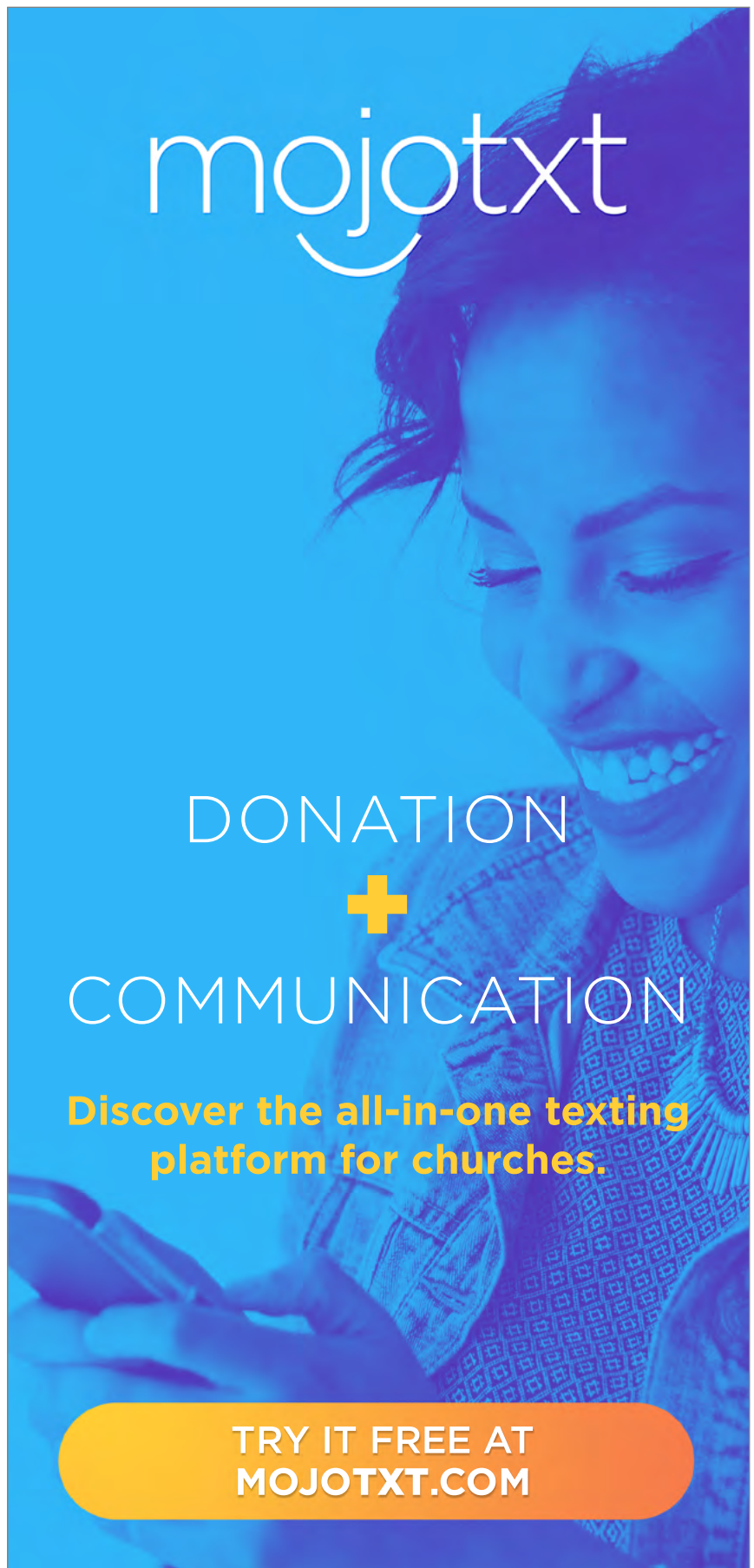
TIP #6: MOBILIZE VOLUNTEERS

Since 98 percent of text messages are opened, sending out messages to mobilize your volunteers when a need arises or to remind them of an upcoming event is a great way to keep all parties in the communication loop—even in real-time as the situation unfolds.

TIP #7: PROVIDE SUPPORT

Stay reachable and offer support when needed. Even if you can't visit them while in the hospital or in their homes you can still safely stay connected with one-on-one text conversations with your members and visitors while still having accountability and protecting your personal phone number.

If you need a solution for your church's text messaging needs, *MojoTxt*—owned and operated by a service production nerd and former church administrator—offers a platform with interactive tools all in one location. With a free 30-day trial you can see for yourself all the benefits text messaging has to offer to churches.

COVID-19 may have changed the way we do a lot of things, but it has not changed the need to connect with others. Nor did the global pandemic change the need for the church to stay connected to people. Happy Connecting!

DON'T MISS THESE IMPORTANT ARTICLES ON CHURCHLEADERS.COM:

MICROSOFT TEAMS: SAFE, SECURE, AND STRONG

RECORDING YOUR OWN WORSHIP ALBUM? 10 REASONS TO GET A PRODUCER

CHURCH ONLINE GIVING PLATFORMS — 5 RELIABLE TOOLS WE LOVE

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