



Enterprise
Wireless
Alliance®



2021-2022 ANNUAL REPORT

PREPARING FOR THE **FUTURE OF PRIVATE WIRELESS**

ABOUT THE ENTERPRISE WIRELESS ALLIANCE

Since its founding in 1953, the Enterprise Wireless Alliance (EWA) has been an advocate at the Federal Communications Commission (FCC), seeking to maximize the efficient use of private land mobile spectrum resources, promote pragmatic operational and technical rules, and minimize spectrum access barriers on behalf of America's business enterprises, private carriers, and manufacturers.

MISSION

To assist business enterprise users, wireless sales and service providers, private carrier operators, technology vendors, and equipment manufacturers in the deployment of wireless communications solutions that promote business productivity in the enterprise wireless space.

MEMBERSHIP



Wireless Sales &
Service Provider

Manufacturer
Vendor

Private Carrier
Operator

Business
Enterprise



Icom America, JVCKENWOOD USA, L3Harris Technologies, and Tait Communications reimburse EWA customers for services and membership through co-op programs.

EXCLUSIVELY FOR EWA MEMBERS

- Bi-weekly Regulatory News Updates
- Broadband/Private LTE network consulting services
- Premier Reporting
- Secure License Management
- EWA License Bank™
- EWA Connect online forum
- 900 MHz Transition Incentive program
- Insider e-newsletter
- Timely bulletins
- Wireless Investment Modeling Tool
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SERVICES WITH PREFERRED MEMBER PRICING

- Spectrum research, planning, and acquisition
- FCC application preparation, verification, and submittal

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FROM THE CHAIRMAN OF THE BOARD



GENO VIVIANO

Will life ever get back to normal, or is this a new normal?

In my letter to the membership last year, we anticipated a vaccine to help fight Covid-19. That has come and gone only to see new versions of the virus. I am afraid this will be with us for a while yet. It is out of our control. I have always said "Control is that which you can control and don't worry about that which you can't." With that said, let's look at the past year at EWA. Once again, we have had another rewarding year with all business indicators progressing in the right direction, highlighted by membership growth, increased frequency coordination market share, and financial stability.

EWA has and continues to maneuver through the pandemic with very little negative effect on the pursuit of its business priorities. The senior management leadership team has done an amazing job supporting the membership and fulfilling EWA's fundamental objectives. This is a tribute to all the cohorts at EWA and their continued commitment to our members during these challenging times.

This brings me to one of our biggest operational changes. Effective January 1, 2022, we implemented the seamless transition in senior staff management from Mark Crosby, CEO for the past fifty years, to Robin Cohen as our new President and CEO. Robin has received the unanimous support of the Executive Committee and the Board of Directors to assume this substantial wireless industry leadership role. Robin has been with EWA in a senior leadership position since 2016. She has gained the confidence of her peers, employees and most importantly our members. She is respected in the marketplace as well as at the FCC. We look on with much enthusiasm as Robin takes over and leads EWA into the future. We also thank Mark for his fifty years of dedication and look forward to working with him in his new role as Chief Strategy Officer.

As I reflect on my first year as Chairman, who could have predicted all of the challenges and opportunities 2021 presented us all? But through it all, the staff was prepared and focused on the job necessary to serve our growing member and customer base. On behalf of the Board of Directors and Executive Committee, we look forward to 2022, my final year as Chairman, and the "New Normal!"

A handwritten signature in black ink that reads "Geno Viviano". The signature is fluid and cursive, with a large initial 'G'.

Geno Viviano
Chairman of the Board

FROM THE PRESIDENT



ROBIN J. COHEN

What is that very catchy soccer chant? “I believe that we will win!” When it comes to EWA and the private wireless industry, I do... In 2020, our world was forced into incredible change and uncharted territories. In 2021, this new reality caused our private wireless industry to adapt and find new ways to thrive as we slowly transitioned out of this change. The last two years have tested all of us as to how resilient we can be: some suffered terrible losses and others thrived. Through it all, EWA and its incredibly talented staff remained focused and resolute. Their collective talent and dedication to EWA’s members and customers is reflected in EWA’s continued success, and we are fortunate enough that we continue to thrive. EWA members are a significant part of the enduring success of the Alliance, and we thank you for your continued trust and support.

As we move into 2022, EWA remains the industry leader in fulfilling spectrum requirements to support new technologies being deployed by private carriers and business enterprise entities. Spectrum requests are more complex to fulfill and are quite strategic due to limited spectrum resources in the private wireless bands. We must become smarter in how we utilize and conserve the spectrum we have today by supporting further innovation. EWA’s advocacy efforts on behalf of our members are critical to the future of private wireless. Our members recognize that there are no other organizations in the wireless industry that advocate so vigorously on their behalf.

EWA’s greatest asset is its incredible staff. I would be remiss not to mention, the one specific “diamond in the rough” who has been leading EWA and the land mobile industry for nearly fifty years, my friend and colleague Mark Crosby. Mark’s passion for the private wireless industry and his representation of EWA’s members has made EWA the success it is today. His recent induction into the Wireless Hall of Fame is a testament to that passion for private land mobile radio success and a recognition that is truly earned and well-deserved.

Now that the baton has been passed, I thank Mark for his leadership, being an incredible mentor to me throughout my career, and his many years of continued friendship. I look forward to leading EWA in the years to come and will continue to exude the same passion for private wireless on behalf of EWA’s members as he has for the past fifty years.

Thank you for your support of EWA. I hope you have a successful 2022, and we look forward to working with you.

A handwritten signature in black ink that reads "Robin J. Cohen". The signature is fluid and cursive, with a large initial 'R'.

Robin J. Cohen
President and CEO

FROM THE CHIEF STRATEGY OFFICER



MARK E. CROSBY

What a great adventure it has been for the past fifty years working with so many great industry leaders on the Board of Directors of the Special Industrial Radio Service Association, the Industrial Telecommunications Association, and now the Enterprise Wireless Alliance. I always looked forward to the meetings of the Board of Directors through the decades as the association's strategic priorities changed to embrace new industry and regulatory opportunities. The Board never hesitated to embrace what needed to be accomplished on behalf of the membership.

Business colleagues often asked me how I could remain at one company for so long. The answer is easy. I worked with a new company every year as the association pursued new affiliations, collaborations, expanded spectrum management capabilities, and membership service offerings. Whether SIRSA, ITA, or EWA, we were never the same association as we were the year before. Why would you want to lead an association that was content?

Of course, not all of our strategic visions, when implemented, were great successes, but many were. A few of those I am most proud of was the automation of the frequency coordination process, an effort that continues today, and one that will continue for the foreseeable future. The consolidation of the radio services, an initiative of the FCC that was panned by many associations at the time, was fully endorsed by SIRSA. The result was a boon to business/industrial licensees, our members, manufacturers, and the industry at large. A few isolated segments of the industry unfortunately today still prefer to sustain spectrum use isolation policies, but I am confident that efforts to limit access to spectrum based on the business pursuits of self-declared "special" classes of licensees are doomed or should be doomed. Another achievement on behalf of EWA members was the development of Cevo, which has automated and simplified the license application process, as well as the release of the Cevo Go app, which allows members to secure certified frequencies in a matter of minutes.

And finally, we have remained a staunch advocate of introducing new spectrum efficient technologies within new and traditional private land mobile bands. These efforts have included the availability of narrower VHF channels, trunking technology, UHF narrowbanding, 800 MHz interstitials and broadband technologies in the 900 MHz bands. There is much more to do here, and EWA will work closely with key licensees and vendors to ensure that the future accommodates technology enhancements to the maximum extent possible.

I look forward to my new role as EWA's Chief Strategy Officer and contributing to Robin Cohen's administration. As always, it has been and remains a pleasure to serve you.

A handwritten signature in black ink, reading "Mark E. Crosby". The signature is fluid and cursive, with a large, stylized initial "M" and "C".

Mark E. Crosby
Chief Strategy Officer

MARK CROSBY INDUCTED INTO THE WIRELESS HALL OF FAME

On November 11, 2021, Mark E. Crosby was inducted into the prestigious Wireless Hall of Fame, one of the industry's highest honors, acknowledging the leadership, innovation, and achievement of each honoree. Eligibility for the Wireless Hall of Fame is based on an individual's contributions to the advancement of wireless services, products, and programs.

Throughout his nearly fifty-year career, Mark Crosby has been a passionate advocate for private wireless, and his leadership has helped shape the industry. He has focused on increasing the efficient use of spectrum, expanding opportunities for business/industrial licensee access to spectrum, encouraging vendors to develop and users to embrace more efficient digital technology, and automating the processes of frequency coordination and licensing. Mark is a visionary, whose ability over the years to bring the industry to consensus has resulted in numerous achievements for private wireless stakeholders.



Attendees of the Wireless Hall of Fame dinner (L to R): Liz Sachs, Bill Landis, Eric Hill, David Reeves, Robin Cohen, Mark Crosby, Gaye Crosby, and Bob McGowan.

The 2021 inductees (L to R): Jim Tracy, Pat Riordan, Ari Fitzgerald, and Mark Crosby.



Image courtesy of the Wireless History Foundation.

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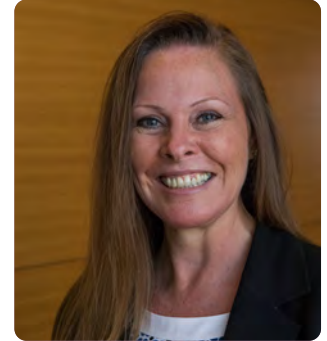
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ADVOCACY

Pursuing regulatory and spectrum initiatives on behalf of land mobile radio and private wireless users requires a concerted effort and commitment. Rule changes often take years to progress from proposal to formal policy adoption. The Alliance monitors the regulatory environment and actively participates in all proceedings that affect spectrum access opportunities. These efforts are reported to the membership most notably through e-newsletters, bulletins, and during bi-weekly Member Regulatory Teleconferences.

Below, members will find a chronicle of actions initiated in 2021 by EWA and the National Wireless Communications Council (NWCC) (formerly the LMCC), of which EWA is an active member.

JANUARY 2021

4.9 GHz – EWA files comments in response to an FCC Further Notice of Proposed Rulemaking (FNPRM) proposing to promote more intensive use of the 4.9 GHz band while creating possibilities that do not exist today for EWA members and others in need of mid-band broadband spectrum. EWA stated in its comments that FCC oversight would ensure that the spectrum is managed fairly and effectively by the states who would receive spectrum management authority for this critical band within their jurisdictions. EWA also noted that the states should embrace the opportunity to derive revenue by leasing this valuable asset to a wide variety of entities, some of which may be mission critical public safety users, but also to businesses that otherwise contribute significantly to state economies.

T-Band – The FCC issues a Public Notice (PN) lifting the application filing freeze for incumbents in the Part 22 (Public Mobile Services) and Part 90 (Private Land Mobile Radio) services operating in the T-Band (470-512 MHz). In addition, the FCC resumed processing renewal applications and those filed prior to when the freeze was implemented in 2012. This decision followed the December 27, 2020, repeal of the Congressional mandate to auction the T-Band, a decision that was consistent with EWA recommendations. The application filing window opened on March 22 and closed on June 21. All incumbent applications were required to be efficiency compliant (narrowband) and to protect TV stations identified by the FCC.

MARCH

Illinois American Water Company Waiver Request – EWA files in support of a Request for Waiver filed by the Illinois American Water Company (ILAW), which sought authority to share use of 800 and 700 MHz frequencies allocated for public safety operations and utilized in the State of Illinois’ STARCOM21 network. EWA noted that ILAW’s request was fully consistent with decades of FCC precedent and that it stands as an example of an instance where shared use of public safety frequencies by Critical Infrastructure Industry (CII) entities promotes both maximum utilization of spectrum and the public interest.

3.45 GHz – In response to a draft Order that would make 100 MHz of mid-band spectrum in the 3.45-3.55 (3.45) GHz band available for auction and 5G deployment across the contiguous United States, a group of organizations, including the American Petroleum Institute, Google, EWA, and the Utilities Technology Council, sent a letter to the Chairs and Ranking Members of the Senate Committee on Commerce, Science, and Transportation and the House Committee on Energy and Commerce advocating that the auction of the 3.45 GHz band use the same framework as that adopted for the auction of spectrum for the Citizens Broadband Radio Service (CBRS), to ensure that this mid-band spectrum reaches as many Americans as possible. The group further suggested that the FCC adopt licensing policies similar to those adopted in the CBRS band to “increase competition, lower costs for prospective entrants, and better ensure that the benefits of 5G are enjoyed by all consumers for a wide variety of innovative uses.”

ADVOCACY

800 MHz – In an *ex parte* letter, EWA requests that the FCC terminate the almost eight-year-old freeze on 800 MHz Expansion Band/Guard Band (EB/GB) spectrum in the Mexican Border Region, noting the Transition Administrator’s recent certification that the 800 MHz rebanding program is complete and that Sprint had vacated entirely any use of this spectrum during the Summer of 2020. EWA explained that while the FCC typically lifts the freeze simultaneously on Sprint-vacated and EB/GB spectrum, that was not necessary since all incumbents were assigned their replacement frequencies.

Commonwealth of Virginia, Department of State Police, Waiver Request – EWA files in support of a Request for Waiver filed by the Commonwealth of Virginia, Department of State Police, seeking to deploy mobile transmitters operating at 100 watts output power rather than the permitted 60 watts. The Alliance supported the Waiver Request and urged the Commission to reconcile the Part 22, Subpart E rules with the rules governing Part 90, an issue raised six years ago by the Alliance.

APRIL

Tulsa, Oklahoma Channel 14 – The LMCC files comments in response to the FCC Media Bureau’s Notice of Proposed Rulemaking opposing KTUL’s request to change from Channel 10 to Channel 14 in Tulsa, Oklahoma with a 1,000-watt transmitter. The LMCC stated the station poses a high risk of interference to land mobile operations and encouraged the FCC to propose an alternative UHF channel for KTUL’s use. On April 26, KTUL filed Reply Comments in response to the Opposition reiterating its position that filtering will enable KTUL and incumbent land mobile systems to coexist on a non-interfering basis. The LMCC subsequently filed an *ex parte* letter recommending on-air testing, and that KTUL should not be granted programming authority until the question of interference to land mobile systems is resolved.

MAY

900 MHz Broadband – The FCC begins accepting applications for broadband licenses at 900 MHz pursuant to a Public Notice released on April 27. Broadband applications are requested on a by county basis and are to provide an eligibility certification, transition plan, and evidence of certification from a FCC-certified frequency advisory committee (FAC).

T-Band – The FCC lifts the application freeze consistent with EWA’s recommendations, but the requirement to protect virtual, inoperable and short-spaced digital television (DTV) stations proves to be problematic. In collaboration with other FACs and the LMCC, EWA begins to research the list of protected TV stations to determine the scope of the excessive protection mandate.

ADVOCACY

4.9 GHz – The FCC adopts an Order staying the implementation of the new state-controlled leasing framework. EWA files an *ex parte* letter urging the FCC to provide business critical entities access to the 4.9 GHz band noting that the record at the FCC already supports primary CII access to this band.

Universal Licensing System (ULS) – The LMCC requests a virtual meeting with Wireless Telecommunications (WTB) and Public Safety and Homeland Security Bureaus (PSHSB) to discuss the many operational issues associated with the ULS.

Pro Forma Assignments and Transfers – The LMCC files a letter with the FCC supporting CTIA and USTelecom efforts to secure regulatory relief for *pro forma* filings through a declaratory ruling.

JUNE

800 MHz EB/GB – In response to the FCC’s PN announcing “the Post-Rebanding Availability for Licensing of Additional Sprint-Vacated, Expansion Band, and Guard Band Channels in the 800 MHz Band,” participating 800 MHz frequency advisory committees test agreed-upon application submittal processes that will eliminate instances of mutually exclusive applications.

ULS – The FCC advises EWA that changes were made to the ULS in the April/May timeframe that caused many of the delays and outages the industry experienced. They confirm that a major overhaul of the Universal Licensing System is in the works but are not prepared to provide any dates for a fully functioning ULS.

T-Band Frequency Selection Procedures Amended – The FCC-certified FACs, in collaboration with the LMCC, adopted an addendum to the LMCC’s frequency selection procedures for the 470-512 MHz band (T-Band). The amendments update 1997 analytical procedures to accommodate both the deployment of new narrowband technologies and to mitigate the potential for interference to incumbent operations. Over the past twenty years, new narrowband technologies have been developed by equipment manufacturers having emission designators at or less than 7.5 kHz that may be licensed on the original 25 kHz channels, on the 12.5 kHz offset channels, or on channels offset by both by 6.25 kHz.

T-Band TV Protection Petition for Rulemaking – The LMCC files a Petition for Rulemaking that would modernize the rules governing protection of television stations by land mobile systems operating in the 470-512 MHz band (T-Band). While the rules governing protection of television stations by land mobile systems remain based on those stations transmitting in an analog National Television System Committee (NTSC) format, these stations have converted to digital transmission using the Advanced Television Systems Committee (ATSC) DTV format (also called ATSC-1). Updated rules will maximize the interference-free use of this important band by both television stations and land mobile systems, consistent with the more advanced technologies that have been implemented by these licensees.

ADVOCACY

TV Repacking – EWA files an informal opposition to TV station KMRZ-LD’s application to relocate from channel 26 to channel 20 in Los Angeles, California. In support of its request, KMRZ stated that “... there are no operating LMRS services on channel 20 within this radius. Therefore, this application is immediately grantable.” EWA questioned how KMRZ reached that conclusion and responded in its opposition that “Contrary to its statement, the application is not immediately or, in EWA’s opinion, ever grantable. KMRZ could not fulfill its responsibility to modify its service to cure any interference given the number of operational PLMR systems in the area. Under these circumstances, KMRZ’s request to relocate from channel 26 to channel 20 must be denied.”

DTV Protected Stations – The LMCC reminds the FCC that T-Band (470-512 MHz) licensees have waited almost a decade for this spectrum to be made available, and the FCC “undoubtedly can appreciate their frustration at being told their applications cannot be granted because they do not protect TV stations that clearly do not need and are not entitled to protection from land mobile systems.” The LMCC conducted a review of the FCC list of TV stations requiring protection and determined that a significant number of stations that land mobile applicants are required to protect are no longer operating on their original channels but are transmitting on new digital channels that will not be impacted by T-Band systems; are no longer operating at all; or, have license information that differs from the information on the updated list by location or by channel. The LMCC urged the FCC to complete this evaluation as promptly as possible and release a corrected list of protected TV stations so the long-delayed full potential of this band may be realized.

JULY

TV Repacking – The LMCC files a letter with Acting Chairwoman Rosenworcel asking for her office’s assistance in addressing the DTV interference situations first brought to the FCC’s attention in September 2020.

TV station KMRZ requests dismissal of its application to move from channel 26 to channel 20 in Los Angeles, California, a request the FCC granted.

800 MHz – EWA formally urges the FCC to issue a Public Notice announcing a date as soon as possible after August 14, 2021, when it will begin accepting applications for 800 MHz 12.5 kHz bandwidth channels.

Augusta Richmond County Waiver Request – EWA files comments on the Augusta Richmond County Consolidated Government request for a waiver to add a tenth 800 MHz Specialized Mobile Radio (SMR) pool channel to the nine Public Safety (PS) channels already licensed at its 6 simulcast sites. EWA did not challenge the need for a tenth channel but identified one PS channel that could be assigned at all six sites, a recommendation the County adopted.

ADVOCACY

T-Band – EWA's research reveals that at least 24 of the new digital TV assignments on the FCC's protected list were granted in violation of the FCC's rules establishing mileage separations from co-channel and adjacent channel digital stations to T-Band markets. The LMCC convenes its first meeting of the T-Band Task Force and agrees to meet with the FCC requesting that they amend the protected TV station list.

AUGUST

4.9 GHz – EWA files an *ex parte* letter responding to the National Public Safety Telecommunications Council's (NPSTC) recent effort urging the FCC to consider its 2013 National Plan Recommendations for the 4.9 GHz band. NPSTC suggested that two 5 MHz channels be made available to CII entities immediately, and three years later, CII would be allowed to have access to the entire band. EWA countered that the entire band should be opened for CII use immediately, since the rationale for the three-year waiting period recommended by NPSTC in 2013 is no longer valid. It was intended to allow public safety users a head start; however, EWA noted that public safety has had exclusive access to the entire 4.9 GHz band for an additional seven, not just three, years before the FCC adopted a licensing freeze in 2020.

SEPTEMBER

T-Band – The LMCC conducts virtual meetings with the offices of then Acting Chairwoman Rosenworcel, Commissioner Starks, and Commissioner Carr seeking their assistance in modifying the list of TV stations that T-Band applicants must protect.

Automatic Identification System NPRM – The LMCC files Reply Comments opposing the allocation of the 160.8875-160.9125 MHz frequencies for certain maritime devices that mark fishing equipment. The comments supported opposition by the Association of American Railroads and noted that “the introduction of transmitting maritime devices in the 160.900 MHz band would cause harmful interference to receiving railroad devices in the band.”

TV Repacking – Despite formal objection from the LMCC, the FCC grants television station KTUL's request to broadcast via a 1,000,000-watt transmitter from Channel 14 (470-476MHz) in Tulsa, Oklahoma. The LMCC alerts incumbent licensees to watch for interference during the testing period.

5 GHz Unmanned Aircraft Systems – EWA submits comments supporting the Petition for Rulemaking filed by AURA Network Systems OpCo LLC and A2G Communications LLC seeking authority to serve Unmanned Aircraft Systems (UAS) on their Part 22 Air Ground Radio Telephone Automated Service (AGRAS) channels.

OCTOBER

TV Repacking – EWA advises potentially affected incumbent land mobile licensees that Monterey, California television station K14TG-D had requested permission of the FCC to broadcast at Channel 14. The letter alerted licensees that the station had begun testing, which could result in degradation to operations.

T-Band – The LMCC filed a letter requesting that the WTB and Public Safety and Homeland Security Bureau adopt a “Blanket Waiver” to offer an “equitable and pragmatic solution” regarding the protection of virtual or inoperative TV stations while the Commission debates the merits of more complex T-Band spectrum management and licensing policies.

NOVEMBER

IoT NOI – The LMCC files comments in response to the FCC’s IoT Notice of Inquiry noting that commercial networks will support some Business/Industrial and Public Safety IoT needs, but those networks do not always exist in areas where these entities operate, do not always provide the levels of reliability and resiliency that are needed, and are not necessarily designed optimally for non-commercial operations.

4.9 GHz FNPRM – EWA files comments suggesting that the Commission adopt rules in response to the Eighth Further Notice of Proposed Rulemaking (FNPRM) that will enable the 4.9 GHz band to reach its full potential. The FCC’s FNPRM confirmed that this band must continue to maximize its use by public safety entities, but also explored various models for shared spectrum use. In its comments, EWA recommended the FCC adopt the NPSTC plan, which NPSTC has continued to endorse over the past eight years.

ADVOCACY

DECEMBER

T-Band – The LMCC urges the FCC to extend until June 30, 2022, the filing window during which incumbents in 470-512 MHz (T-Band) may modify existing systems. In addition, the LMCC asked the Wireless Telecommunications Bureau and Public Safety and Homeland Security Bureau to “confirm that there are no current plans to rescind the Public Notice suspending the filing and processing of applications in the band by new applicants.”

4.9 GHz – The LMCC files a request with the FCC seeking a 30-day extension from December 28, 2021, to January 27, 2022, of the Reply Comment deadline in the 4.9 GHz Eighth Notice of Further Proposed Rulemaking. The FNPRM asks interested parties to consider multiple approaches for promoting greater public safety use of the band and to comment on a variety of shared access models for facilitating non-public safety access. An extension was granted.

6 GHz – EWA urges the FCC to grant the Request for Stay filed by certain public safety and critical infrastructure organizations. EWA further argued that it is “essential that the FCC place a temporary hold on its certification of new low-power indoor (LPI) devices, as well as on the marketing, sale, and importation of already certified LPI devices, until the Commission has an opportunity to evaluate the impact of the test report submitted by Southern Company Services, Inc. on the FCC’s conclusions in the 6 GHz Order.

JANUARY 2022

LMCC Becomes National Wireless Communications Council – After fifty years, the membership of the Land Mobile Communications Council unanimously agreed to change the organization’s name to the “National Wireless Communications Council” (NWCC) to better reflect the association’s purpose and advocacy initiatives conducted on behalf of its membership and associated constituencies.

FEBRUARY

T-Band – EWA files Comments supporting the NWCC’s Petition for Rulemaking that proposed amendments to FCC Rule Section 90.309 governing the protection of television stations by land mobile systems operating in the T-Band. This was necessary in light of the mandatory migration of full-power and Class A television stations from the analog National Television System Committee (NTSC) format to the digital Advanced Television Systems Committee (ATSC) format.

Rural Spectrum Initiatives – EWA files Comments in response to the FCC Notice of Proposed Rulemaking to “further Congressional goals of diversifying access to spectrum and promoting service to rural areas...” EWA supports the objective of providing incentives for licensees to partition, disaggregate, and/or lease unused spectrum to small carriers, rural carriers, and Tribal Nations including license term and construction extensions. EWA also urged the FCC to adopt a different base line for determining construction compliance for private enterprise entities noting that population and geographic coverage requirements are misapplied for private wireless internal communication systems. EWA also requested that the FCC modify its rules to permit the leasing of exclusive-use Part 90 UHF and VHF licenses.

MARCH

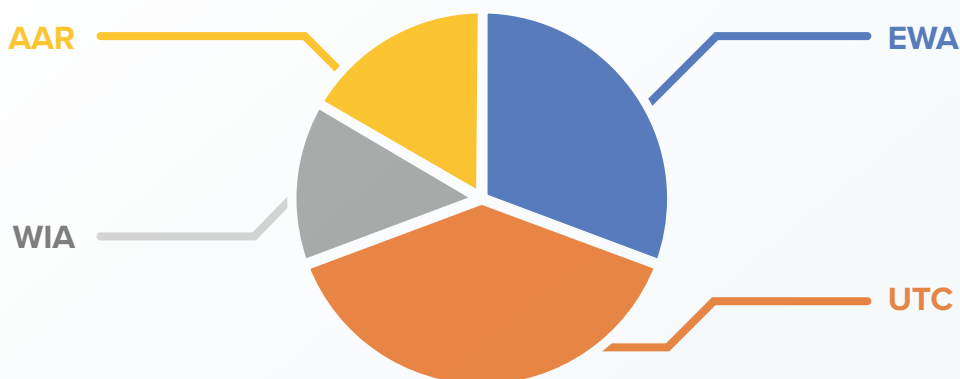
T-Band – The FCC releases a Public Notice updating the TV station protection list. EWA independently confirmed this updated list removed all virtual and non-operational TV stations and has begun working with the FCC’s Wireless Telecommunications Bureau for expeditious approval of T-Band applications that were negatively impacted by the outdated TV list.

4.9 GHz – EWA files an *ex parte* letter with the FCC continuing its support for greater sharing between CII and Public Safety entities by permitting CII access to the 4.9 GHz band.

ADVOCACY

2021 PART 90 FILINGS

In 2021, EWA and other industry associations participated in FCC proceedings as represented below.



NWCC PARTICIPATION

EWA is an active member of the National Wireless Communications Council, a non-profit association of seventeen organizations that represent the wireless communications interests of public safety, critical infrastructure, business, industrial, transportation, private and common carriers, and manufacturers of wireless communications equipment. Mark Crosby serves on the NWCC Board of Directors as Secretary/Treasurer.



**National Wireless
Communications Council**

ADVOCACY
BY THE
NUMBERS

11

FILINGS
BY EWA

5

FILINGS BY
THE NWCC

25

EWA MEMBER-ONLY
REGULATORY
TELECONFERENCES

SPECTRUM SOLUTIONS & STRATEGIES

EWA is the leader in frequency coordination and license preparation services for the Business/Industrial Land Transportation (Business/Industrial) sector which includes private carrier operators and wireless sales and service entities. In 2021, EWA increased its market share, performing nearly 50% of all Business/Industrial frequency coordination certifications. EWA's continued growth is attributed to its expertise in producing spectrum solutions for routine to complex wireless system requirements. In addition, EWA prepares more than 11% of all public safety applications submitted for frequency coordination.

800 MHZ OPPORTUNITIES

In the southwestern area of the country, from Texas to California and as far north as Las Vegas, Nevada, the 800 MHz band had been frozen for nearly twenty years. However, with the completion of the 800 MHz rebanding program, the FCC ultimately lifted the freeze along the Mexican Border Region (MBR) and made available approximately eighty Expansion and Guard Band (EB/GB) channels. EB/GB spectrum was released in the rest of the country in 2019.

Applicants included EWA members seeking additional spectrum for Specialized Mobile Radio systems and Industrial/Business applicants seeking alternatives to 900 MHz spectrum. EWA was fortunate to have accommodated the spectrum requirements in this region for many of its members and frequency coordination customers, processing over 95% of the applications seeking EB/GB spectrum.

In addition to the wave of applications that resulted from the termination of the Mexican Border region application freeze, EWA managed several large spectrum projects including:

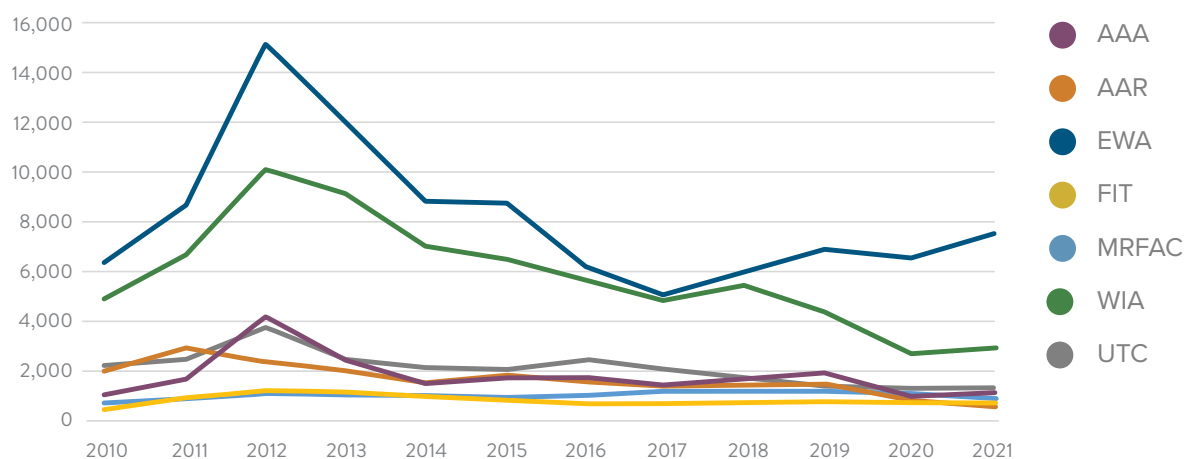
- Two EWA members collaborated on a spectrum project for a professional football team to consolidate disparate systems into one wireless solution. The team installed a new wireless system that will accommodate internal communications, including security, at their headquarters and stadium locations. The football team had been operating two separate UHF/VHF systems and during upgrade discussions chose a more robust solution at 800 MHz. EWA provided spectrum analyses, procurement, and licensing services for this system which encompasses nearly forty discrete 800 MHz channels.
- To support the spectrum needs of a petrochemical facility, EWA was requested to research all private land mobile spectrum bands to accommodate capacity and operational requirements. After substantive research, EWA identified an 800 MHz solution.

SPECTRUM SOLUTIONS & STRATEGIES

- EWA routinely serves the utility and petrochemical industries on critical projects that often involve a significant number of exclusive channels and sites to satisfy mandatory coverage and capacity requirements. Projects include the identification of spectrum requirements along both the Canadian and Mexican borders where channels are traditionally difficult to identify due to reduced spectrum availability pursuant to border agreements. EWA solutions have included sharing spectrum with public safety networks, leasing, spectrum acquisition strategies and spectrum engineering.

EWA – THE MARKET LEADER

FCC Application Volume



BY THE
NUMBERS

47.8%

VOLUME OF B/ILT
APPLICATIONS
CERTIFIED BY EWA

11.4%

VOLUME OF PUBLIC
SAFETY APPLICATIONS
PROCESSED BY EWA

PRODUCTS & SERVICES

EWA LICENSE BANK™

License Bank is the ideal solution for an organization with a dispersed workforce that requires access to a simple database and official, printable original versions of FCC licenses. With access to a database customized with a company's FCC license information, multiple employees, regardless of location, may view license data but may not make any changes. Each user has an individual License Bank login, keeping the company's main FCC Registration Number (FRN) and ULS password secure. Users can locate licenses easily using intuitive search terms, filter the results, and export data for further analysis. EWA manages access to over 2,500 licenses.

SECURE LICENSE MANAGEMENT

EWA's FCC license management service monitors the status of a company's FCC licenses and provides monthly notification reports with advance alerts on build-out deadlines and upcoming FCC license expirations. EWA monitors over 25,000 call signs for more than 100 companies with this service.

SAVING VALUABLE ASSETS

EWA notifies licensees listed in the FCC's Termination Pending weekly Public Notice, who are at risk of losing their licenses due to non-compliance with FCC rules. Through the program, EWA assists these licensees by preparing petitions for reinstatement with certifications of construction to maintain the validity of their licenses. In 2021, EWA filed 149 Petitions for Reconsideration.

PRODUCTS & SERVICES

LEVERAGING EWA CONNECT

Through the EWA Connect online community, EWA members network, share information and expertise, and seek technical assistance. The community launched in 2020 and continues to grow. Discussion groups are open to all members for general industry topics, including licensing, technician training, and general interests.

900 MHZ TRANSITION PROGRAM

Under its 900 MHz Incumbent System Transition Services Agreement with Anterix, EWA facilitates incumbent transition activities. EWA is presently involved in a few hundred agreements reflecting successful negotiations and retune completions since January 2021. As part of the agreement, Anterix offers EWA members a financial incentive to complete these transitions in accordance with contractual deadlines.

EDUCATION & OUTREACH

EWA ASSUMES MANAGEMENT OF THE CONSORTIUM FOR CERTIFIED SERVICE CENTERS —

In 2022, EWA assumed management of The Consortium For Certified Service Centers C-CSC), a non-profit corporation whose objective is to publicly identify and support service organizations that strive to provide professional services which exceed customer expectations and experience. C-CSC manages and administers the Certified Service Center certification program.

The Consortium is governed by a Board of Directors that includes certified service organizations and representatives from EWA, the Electronics Technicians Association (ETA), and the Professional Service Association (PSA).



EWA MEMBERS EVALUATE IN-BUILDING DEPLOYMENTS

In-building wireless radio networks for emergency responders, also known as emergency responder communications enhancement systems (ERCES), lack – but need – national standards and unifying best practices to ensure these networks operate as intended when needed. A survey, conducted by EWA on behalf of the Safer Buildings Coalition sought input from EWA members on an array of issues that affect the installation of these systems to identify areas of “disorder” or chaos in the installation and system maintenance process. In particular, the survey sought data on harmful interference between multiple systems. The survey drew responses from across the private wireless industry, including public safety, installers, and equipment vendors. EWA Chief Strategy Officer Mark Crosby served as co-chair of the “Disorder to Order” Working Group of the No Noise Task Force.

EDUCATION & OUTREACH

MALIK PEARSON RECEIVES 2021 VESTAL SCHOLARSHIP

Malik Pearson, a student at Old Dominion University (ODU), has received the EWA-Joseph B. Vestal Endowed Scholarship, which awards financial aid to a full-time student at ODU enrolled in Electrical Engineering Technology or Information Systems Management who intends to pursue a professional career in wireless applications or telecommunications.

Mr. Pearson is pursuing a Bachelor of Science in Information Systems and Technology and maintains a 3.8 grade point average. Mr. Pearson plans a career in wireless communication or network security.

Scholarship funds are raised through individual and corporate donations.



EWA-JOSEPH B. VESTAL SCHOLARSHIP RECIPIENTS

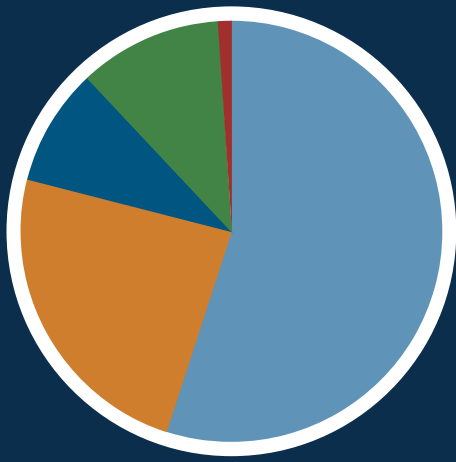
2021 Malik Pearson	2017 Jacob Wilson
2020 Jeffrey Boadi	2015 Jerel Miles
2019 Amanda Palmer	2014 Jakwan Johnson
2018 Jeremy Sklute	2013 Chris Bowles
2017 Akeyvianna Rembert	

EXPLORING EDUCATIONAL OPPORTUNITIES

The mission of the Private Wireless Education Council is to develop educational training programs that support the informational and technical knowledge requirements of private wireless-oriented organizations, including wireless sales and service organizations, communication service providers, manufacturer representatives, business enterprises, and both primary and ancillary equipment manufacturers.

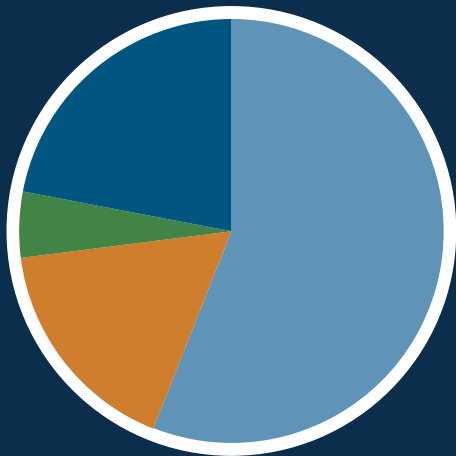


FINANCES



SOURCES OF REVENUE

- Spectrum Solutions 55%
- Research and Application Preparation 24%
- Membership and Membership Services 11%
- Education and Management Services 9%
- EWA Equity, Inc. 1%



USES OF REVENUE

- Staff and Benefits 56%
- Consolidated Operating Surplus 22%
- Operations 17%
- IT Infrastructure 5%

The Enterprise Wireless Alliance engages the accounting firm of Dembo Jones, North Bethesda, Maryland, to conduct an annual audit of its financial activities. The percentages listed do not include non-operational activities. Audited financial statements may be obtained by contacting EWA's Accounting Department at 800-482-8282.

LEADERSHIP & STAFF

SENIOR LEADERSHIP



Robin Cohen
President and CEO



Mark Crosby
Chief Strategy Officer



Ila Dudley
Associate Vice President
Spectrum Initiatives



Eric Hill
Executive Vice President
Corporate Operations

STAFF



Row 1: Robin Cohen, Mark Crosby, Ila Dudley

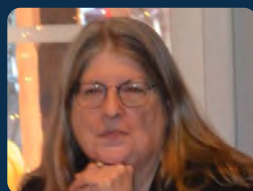
Row 2: Karen Holmes, Judy Wilson, Karen Fouchie, Cyndi DeVecchis, Bette Rinehart, Andrea Cumpston, Carol Pullis

Row 3: Bill Mulholland, Dan Winkler, Eric Hill, Kyle Entz, Amanda Miller

Not pictured in staff photo



Andrew Burkholder



Cecilia Hayes



Carla Hurtubise



Raghu Kanchi



Denisse Montenegro



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Alliance®



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company/enterprise-wireless-alliance



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