

**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554**

*In the Matter of*

Authorizing Permissive Use of the 3GPP 5G Broadcast  
Transmission Standard for Low Power Television Stations  
Under Part 74 of the Commission’s Rules

**PETITION FOR RULEMAKING**

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Pursuant to Section 1.401 of the Commission’s rules, 47 C.F.R. § 1.401, and Section 157(a) of the Communications Act of 1934, as amended, 47 U.S.C. § 157(a), **XGN / X1 Mobile and Tyche Media LLC** (collectively, “Petitioners”) hereby petition the Federal Communications Commission to amend Part 74 of its rules to authorize Low Power Television (“LPTV”) stations to elect, on a voluntary basis, to transmit using the 3GPP 5G Broadcast standard as an alternative to the currently authorized ATSC 1.0 and ATSC 3.0 transmission standards.

**Background on Petitioners**

XGN and X1 Mobile are focused exclusively on 5G Broadcast in the United States and internationally through a sister company in Ireland. The companies are led by Frank Copsidas, CEO, who founded the 5G Broadcast Collective, serves as Founder and Chairman of the LPTV Broadcasters Association, is the licensee of seven LPTV stations, and is a three-time Telly Award winner for production.

The XGN / X1 Mobile team is dedicated to the efficient and simple rollout of 5G Broadcast. The companies develop solutions across the entire transmission and reception chain—from a 5G Broadcast exciter, to design of a 5G Broadcast core, to receivers—and conduct field testing on stations in both the United States and the European Union.

Tyche Media LLC is the licensee of WCRN-LD (Facility ID 9154), Boston, Massachusetts, which is currently operating under an experimental Special Temporary Authority for 5G Broadcast to conduct field tests and proof-of-concept demonstrations. Tyche Media’s experimental operations at WCRN-LD have provided critical real-world data supporting the technical feasibility and regulatory compliance of 5G Broadcast transmission by LPTV stations.

**I. Summary of the Proposal and Distinction from Prior Filings**

This Petition proposes that the Commission amend its rules to permit LPTV stations to operate using the 3GPP 5G Broadcast transmission standard on a voluntary, elective basis. Under the proposed rules:

1. An LPTV station electing 5G Broadcast operation shall transmit **at least one linear free-to-air broadcast stream** encoded at a minimum resolution of **720p**. This requirement is a deliberate step up from the lower-resolution flexibility often associated with ATSC 3.0 implementations.
2. Of the remaining capacity within the station’s 6 MHz channel after provision of the required linear stream, a **minimum average of fifty percent (50%)** shall be devoted to **public safety solutions**.
3. In no event shall the bandwidth allocated to public safety solutions be less than **2 MHz**.
4. An LPTV station that qualifies for mandatory carriage under the Communications Act or the Commission’s rules shall not be eligible to operate under the 5G Broadcast standard, **in order to avoid any burden on multichannel video programming distributors**.

### **Critical Distinction from the HC2 Proposal.**

The HC2 Broadcasting Holdings Inc. in MB Docket No. 25-168 and this petition are substantially different in their core requests and public-interest priorities. HC2’s proposal contemplates exclusive datacasting with no continuing linear free-to-air obligation and no dedicated public-safety capacity. **This Petition, by contrast, requires a high-quality linear free-to-air stream and permanently reserves substantial bandwidth for public safety**, including first-responder applications capable of saving lives. The difference is fundamental: one prioritizes private data delivery; **the other prioritizes the public interest that broadcasters are required to serve**.

Petitioners’ practical approach ensures that LPTV stations continue to fulfill their core public-service obligations while gaining the efficiency and reach of 5G Broadcast. Experimental testing by Petitioners includes first-responder solutions specifically designed to save lives. **Saving lives is the highest form of local public service.**

### **II. LPTV’s Distinct Purpose and Technology Suitability**

Congress and the Commission created the LPTV service to serve local communities and to foster technological innovation on a secondary basis. LPTV stations characteristically operate at low power from relatively low towers.

5G Broadcast is well suited to this architecture. **ATSC 3.0, by contrast, was designed primarily by and for full-power broadcasters operating high-power, high-tower facilities. Its cost structure, private intellectual-property fees, and technical assumptions reflect the economics and coverage models of full-power television.** Imposing that framework on LPTV stations creates a mismatch with both the service’s historical purpose and its physical deployment characteristics.

5G Broadcast can be deployed in under four hours for as little as \$25,000 (with costs expected to decline as deployments scale) and without the multiple private rights-holder fees associated with ATSC 3.0 transmission. This rapid, low-cost path aligns with LPTV's original mission of local service and innovation.

### **III. Global Interoperability and Life-Saving Alert Speed**

The 3GPP 5G Broadcast standard is a single, worldwide standard. Just as cellular phones based on 3GPP technology can be used almost anywhere in the world, devices supporting 5G Broadcast can receive emergency alerts across national borders. This global interoperability benefits U.S. residents traveling abroad and foreign visitors to the United States, who can receive critical public-safety information on the same standard without needing country-specific hardware or software adaptations.

Moreover, because 5G Broadcast is a true one-to-many broadcast technology rather than a unicast cellular service, it can deliver an emergency alert to all compatible receivers within the coverage area in **under one-half second**. This speed advantage is inherent in the broadcast architecture and is especially valuable when cellular networks are congested or unavailable.

### **IV. Technology Maturity, International Progress, and Deployment Readiness**

5G Broadcast is a nascent but rapidly maturing technology that has undergone serious development over the past three years. Customer Premises Equipment (CPE) receivers are already a reality for Petitioners and will be commercially available in the very near future. At Mobile World Congress (MWC) 2026, **XGN presented a commercially available 5G Broadcast rugged phone**. This is a version 1.0 proof-of-concept device demonstrating real-world receiver capability. **Commercial smartphones with native 5G Broadcast reception are scheduled to roll out in Europe in 2027** on Band 113. Europe and parts of Africa are adopting the standard more aggressively than the United States. France has already begun deploying new 5G Broadcast transmitters, with plans to achieve coverage of over 90 percent of the country by 2029.

XGN's 5G Broadcast core and transmission chain have been highly stable for a new technology. A focused, three-year rollout strategy is both necessary and achievable. **Petitioners are prepared to launch a 5G Broadcast network covering a population of more than 50 million within 24 months of the Commission's authorization of 5G Broadcast under Part 74**. The most important factor in any such deployment is that it serves the needs of the local community—from the free over-the-air linear broadcast stream to its uses for local public safety.

**Authorization would allow the United States to join France and other countries already deploying 5G Broadcast and help position the United States as a leader in this 3GPP technology.**

### **Specific WCRN-LD Experimental Results**

Under an experimental Special Temporary Authority, **WCRN-LD (Facility ID 9154), Boston, Massachusetts**, licensed to Tyche Media LLC, is actively transmitting on Channel 30 at its licensed 15 kW ERP using the station's existing directional antenna and full-service emission mask. The 5G Broadcast core has proven exceptionally stable in continuous operation.

Field measurements conducted by the licensee confirm that the station has experienced **no interference** to or from other services and that the transmitted signal remains fully within all applicable regulatory requirements, including power limits, emission masks, and interference-protection criteria.

The experimental program at WCRN-LD (conducted in coordination with WWOO-LD) includes testing of:

- Delivery of content (video, audio, and data) via the 5G Broadcast core;
- Coordination between cellular cores and the 5G Broadcast core;
- Long-term stability of one video and one audio stream;
- Delivery of video, audio, and data to first responders;
- Verification of coverage against predicted maps;
- Field reliability of new 5G Broadcast receivers with configured chips;
- Data bonding between the two Boston-market stations;
- Initial implementation of Further evolved Multimedia Broadcast Multicast Service (feMBMS) under 3GPP Releases 18 and 19;
- Applications developed specifically for 5G Broadcast; and
- Multiple Middleware options, enabling support for various receivers

These real-world results from an operating LPTV facility in a major market demonstrate both technical maturity and regulatory compliance, supporting the feasibility of the 720p linear-stream requirement and the dedicated public-safety capacity reservation proposed in this Petition.

Complementary testing by Petitioners of CPEs, proprietary receiver software (to be unveiled at IBC Amsterdam in September 2026), lightweight GPS-accuracy and encryption solutions, and first-responder applications further demonstrate readiness. More advanced receivers are planned for unveiling at MWC Barcelona in March 2027. Commercial availability of receivers is expected in early 2027.

### **V. Public Interest Justification**

Authorization of voluntary 5G Broadcast for LPTV stations under the conditions proposed here would:

- Honor LPTV's foundational purpose of local service and innovation;

- **Require a higher-quality free-to-air linear stream (minimum 720p) than the lower-resolution flexibility often associated with ATSC 3.0;**
- **Guarantee a minimum average of 50% of remaining capacity (and never less than 2 MHz) for public safety solutions, including first-responder applications that can save lives;**
- Leverage a single worldwide 3GPP standard so that travelers and foreign visitors can receive emergency alerts on the same technology used nearly everywhere cellular service is available;
- Deliver those emergency alerts in under one-half second through efficient one-to-many broadcasting rather than unicast cellular delivery;
- Reject the notion that exclusive private datacasting without linear service or public-safety obligations constitutes the best and highest use of broadcast spectrum;
- Enable rapid, low-cost deployment suited to low-power, low-tower LPTV facilities, without the private fee structures of ATSC 3.0;
- Capitalize on three years of intensive development, near-term commercial CPE and smartphone availability (including the version 1.0 rugged phone presented at MWC 2026), and demonstrated international progress (including France’s multi-year coverage plan);
- Support Petitioners’ concrete commitment to cover more than 50 million people within 24 months of authorization, with deployments centered on local community needs; and
- No mandate to ATSC 3.0 for LPTV. Let broadcasters tailor their individual facilities to what best suits the local community and serves the best public interest.

**To avoid any impact on multichannel video programming distributors, LPTV stations that qualify for mandatory carriage rights shall remain ineligible for 5G Broadcast operation.**

## **VI. Proposed Rule Amendments**

Petitioners request that the Commission amend Part 74 of its rules to incorporate the following provisions (or substantially equivalent language):

### **§ 74.XXX Authorization of 5G Broadcast Operations by LPTV Stations.**

- (a) An LPTV station may elect, on a voluntary basis, to transmit using the 3GPP 5G Broadcast standard in lieu of ATSC 1.0 or ATSC 3.0, subject to the conditions set forth in this section and other applicable Commission rules.
- (b) Any LPTV station operating under the 5G Broadcast standard shall transmit at least one linear free-to-air program stream encoded at a minimum resolution of 720p.
- (c) Of the remaining transmission capacity within the station’s authorized 6 MHz channel after provision of the required linear stream described in paragraph (b), a minimum average of fifty

percent (50%) shall be used for public safety solutions. In no case shall the bandwidth allocated to public safety solutions be less than 2 MHz.

**The Commission may require periodic certification or simple reporting to verify compliance with the public-safety capacity requirement.**

(d) For purposes of this section, “public safety solutions” include, but are not limited to, emergency alerting (including alerts deliverable in under one-half second via broadcast), first-responder data and situational awareness services, high-accuracy positioning data, encrypted public-safety communications, and other mission-critical applications that support public safety, government, and emergency response, including solutions demonstrated to save lives.

(e) An LPTV station that qualifies for mandatory carriage under the Communications Act or the Commission’s rules shall not be eligible to operate under the 5G Broadcast standard, in order to avoid any burden on multichannel video programming distributors.

(f) Operations under this section shall comply with all applicable interference protection requirements, power limits, and other technical rules applicable to LPTV stations, and shall not cause harmful interference to any primary service.

Conforming amendments to the definitions and technical standards sections of Part 74 should be made as necessary to recognize the 3GPP 5G Broadcast standard as an authorized transmission mode for LPTV stations.

## **VII. Conclusion**

**LPTV was created to serve local communities and to enable innovation. 5G Broadcast is suited to LPTV’s low-power, low-tower architecture; ATSC 3.0 was designed for high-power, high-tower full-power facilities.**

5G Broadcast has matured rapidly over the past three years. CPE receivers are already a reality for Petitioners. At MWC 2026, XGN presented a commercially available 5G Broadcast rugged phone (version 1.0 proof-of-concept device). XGN’s 5G Broadcast core and transmission chain have been highly stable for a new technology. European smartphone rollouts on Band 113 are scheduled for 2027, and France is actively deploying transmitters toward 90 percent national coverage by 2029. A focused three-year strategy is both necessary and realistic. **Petitioners stand ready to launch a network covering more than 50 million people within 24 months of authorization, with every deployment centered on the needs of the local community—from the free over-the-air 720p linear stream to local public-safety applications.**

Authorization would allow the United States to join France and other countries already deploying 5G Broadcast and help position the United States as a leader in this 3GPP technology.

Unlike proposals that would permit exclusive private datacasting with no continuing linear obligation or public-safety reservation, this Petition requires a high-quality free-to-air linear

stream and permanently dedicates substantial bandwidth to public safety—including first-responder solutions that can save lives. Because 5G Broadcast is based on a single worldwide 3GPP standard, travelers and foreign visitors can receive emergency alerts on the same technology used nearly everywhere cellular service is available. Those alerts can be delivered in under one-half second through efficient one-to-many broadcasting.

**Experimental operations at WCRN-LD have demonstrated exceptional core stability, no interference, and full regulatory compliance.** There should be no mandate to ATSC 3.0 for LPTV. Let broadcasters tailor their individual facilities to what best suits the local community and serves the best public interest. The Commission should authorize voluntary use of the 3GPP 5G Broadcast standard by LPTV stations under the public-interest conditions set forth above.

Respectfully submitted,

**XGN / X1 Mobile**

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**Tyche Media LLC**

Licensee of WCRN-LD (Facility ID 9154), Boston, Massachusetts

By: Frank Copsidas, CEO

**Frank Copsidas**

CEO, XGN / X1 Mobile/Tyche Media

Date: August 10<sup>th</sup>, 2026