



Exhibit – Narrative Statement (FCC Form 442, Item 7)

Applicant: Mobileye Vision Technologies Ltd.

Experiment Title: Automotive Imaging Radar Field Testing (BSR/BSRC; Configurations B3, C3)

Bands of Operation: 76–81 GHz (Automotive radar band)

Use Case: Non-commercial R&D field testing on vehicles in controlled driving scenarios

Contact: Tomer Oren, RF and Radar Compliance Engineer

This exhibit is submitted in accordance with FCC Form 442, Item 7, because Items 4, 5, and 6 are answered "NO."

7(a) Complete Program of Research and Experimentation

Overview & Objectives

Mobileye seeks temporary authorization to operate next-generation automotive imaging radar units (models **BSR** and **BSRC**, **configurations B3 and C3**) to conduct controlled on-road evaluations. Testing focuses on radar performance characterization, environmental robustness, and safety behavior in real-world conditions. Operations are **non-commercial** and limited to research & development.

Equipment Description

- **Device Types:** Automotive FMCW imaging radars (BSR/BSRC; B3/C3)
- **Frequency Range:** **76–81 GHz** (automotive radar band)
- **Modulation/Technique:** FMCW chirp sequences for range-Doppler-angle sensing; MIMO-array for angular resolution
- **Emission Characteristics:** duty-cycled chirps; occupied bandwidth per device model; compliant with experimental parameters requested under Part 5 limits (specific values listed in the online equipment section)
- **Antenna:** Integrated array/planar antenna; fixed to host-vehicle mounting points
- **Power:** Limited to the values requested in the application; sufficient for short-range automotive sensing
- **Number of Units:** As specified in the Form 442 equipment list (per model/configuration)

Theory of Operation

The radar transmits FMCW chirps across the authorized band. Correlation processing yields **range**; Doppler FFT yields **radial velocity**; multi-channel array processing yields **angle of arrival**. High-resolution "4D" point clouds support perception algorithms for ADAS and autonomous driving. **No communications services** are provided; transmissions are solely for sensing/measurement.

Test Scenarios & Procedure

- **Operational Environments:** Urban streets, suburban arterials, highways, parking areas, test tracks
- **Conditions:** Day/night, clear/rain/fog as available; traffic density variations
- **Targets:** Stationary reflectors (signage/guardrails), moving vehicles, pedestrians/cyclists (as encountered under normal traffic with safety observers)
- **Data Handling:** On-board logging of raw/processed radar data; post-processing offline; no public networks required

Controls & Commitments

- Operations are **non-commercial; no distribution/market deployment** during the test period
- **Immediate cessation** upon FCC request
- Testing will be conducted to **avoid harmful interference**, with proactive monitoring and cooperation with spectrum authorities as needed

7(b) Specific Objectives to Be Accomplished

1. **Performance Characterization:** Quantify detection probabilities, false-alarm rates, range/velocity/angle accuracy, and resolution under real traffic conditions.
2. **Environmental Robustness:** Evaluate performance in rain/fog/aerosols, multi-path, and dense urban clutter.
3. **Safety & Functional Behavior:** Validate safety-related behaviors (e.g., interference resilience, self-limits) in field conditions.
4. **Algorithm Development:** Collect representative datasets to improve perception and sensor-fusion algorithms for ADAS and autonomous functions.
5. **Reliability & Integration:** Assess long-duration reliability of sensors and mounting under automotive environmental stresses.

7(c) Contribution to the Radio Art

The proposed experimentation advances the state of **millimeter-wave automotive radar** by:

- **Enhancing high-resolution sensing:** Field datasets enable improvements in bandwidth utilization, beamforming, and clutter suppression—key to imaging radar evolution.

- **Validating coexistence/behavior:** Real-world testing informs emission-pattern optimization, duty-cycle management, and mitigation techniques to minimize interference potential—benefiting spectrum efficiency.
- **Expanding utilization in transportation safety:** Improved radar perception supports collision avoidance, AEB, ACC, and other ADAS features, broadening practical RF sensing applications in mobility.
- **Addressing under-studied conditions:** Edge cases (e.g., complex multipath in urban canyons, adverse weather dynamics) cannot be fully replicated in lab environments; structured field experiments provide empirical insight not otherwise available.

Additional Information

Geographic Area of Operation

Testing will occur on public roads and dedicated test areas as listed in the application's location section and/or in the attached **Experimental Test Plan and Locations**. Operations are mobile and geographically constrained to the nominated counties/routes/tracks.

Schedule / Duration

Requested test window: 25 May 2026 – 24 May 2026 (12 months).

Daytime and nighttime operations may occur, subject to local laws and safety plans.

Operational Safeguards & Interference Mitigation

- Use only the authorized bands and parameters specified in the grant
- Output power limited per the application
- Duty-cycle and beam-steering controls to reduce off-axis exposure
- Pre-test functional checks; continuous monitoring for unintended emissions
- **Immediate cessation** if harmful interference is observed or upon Commission request

Non-Commercial Use / R&D Only

The devices are used **strictly for research and development**; there will be **no commercial deployment** or distribution during the experimental period.

Cease-Operation Commitment

All operations will **cease immediately** upon FCC request or at authorization expiry, whichever occurs first.

Attachments (submitted separately as exhibits)

- Technical Specification – BSR/BSRC Radar Units
 - Experimental Test Plan and Locations
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Signature

Mobileye Vision Technologies Ltd.

By:

Name : Tomer Oren

Title: RF Engineer

Date: May 25 ,2026