

The agency's new equipment-authorization rules impact where manufacturers can cost-effectively conduct R&D for devices certified for sale in the United States.

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Dec 13, 2015—The rapidly expanding universe of "connected devices" and the burgeoning Internet of Things (IoT) market offer tremendous moneymaking potential for manufacturers of radio-frequency (RF) emitting products, including RFID readers. New RF devices are being developed, tested, manufactured and sold all over the world. In the interest of controlling production costs, many manufacturers that sell their devices in the United States conduct design and regulatory compliance testing overseas.

In just a few short months, however—barring action by the [Federal Communications Commission](#) (FCC)—manufacturers that conduct R&D and device testing in many countries could see their development costs rapidly increase.



The FCC is currently in the process of "de-authorizing" various test laboratories. It is critical for manufacturers to stay current on developments that that could have an adverse effect on their marketing, both in the United States and abroad.

FCC Bans Use of Non-Accredited Testing Labs

The FCC recently promulgated new RF equipment authorization rules that significantly impact the business practices of RF equipment manufacturers, importers, marketers and testing labs (see [Amendment of Parts 0, 1, 2 and 15 of the Commission's Rules regarding Authorization of Radiofrequency Equipment](#)).

Under the old rules (and until the expiration of the transition period described below), the FCC permits applicants for RF equipment certification to submit testing reports prepared by either an FCC-accredited lab or a 2.948-listed lab. (The "2.948" refers to Section 2.948 of the FCC's rules that authorized use of those labs.) The main difference between the two is that an accredited lab must meet the general requirements of the [International Organization for Standardization/International Electrotechnical Commission](#) ("ISO/IEC") in accordance with certain FCC rules, whereas a 2.948-listed lab is accepted and listed by the FCC's [Office of Engineering and Technology](#) (OET) as such if it submits certain information to the FCC, such as a description of the test site, testing structures and measuring equipment used, as well as data showing that the lab meets the accepted standard for measuring RF emissions.

Among other things, the new rules disallow the use of test results from non-accredited 2.948-listed labs that were accepted and listed by the OET. The new rules, which extend to foreign testing labs, require that all test results used in the certification process be provided by a lab accredited by an FCC-recognized accreditation body. By the end of the current transition period, foreign labs must be accredited by an approved foreign designating authority and be recognized by the FCC under the terms of a government-to-government Mutual Recognition Agreement (MRA). Labs located in a country that does not have an MRA with the United States must be accredited by an FCC-recognized organization.

In sum, manufacturers that have been using 2.948-listed testing labs in non-MRA countries will no longer be able to utilize the results from those labs for the purposes of certifying RF devices sold in the United States unless the FCC implements procedures for those labs to be recognized, and those labs obtain such recognition. The rub is that the FCC did not provide for any such procedures in the new rules.

Transition Period

The FCC's transition plan mandates that all 2.948-listed labs' authority will expire on July 13, 2016. Furthermore, as of Oct. 12, 2016, no further test reports from such labs, foreign or domestic, will be accepted for devices tested before the July 13 expiration deadline (see [Authorization of Radiofrequency Equipment, Final Rule, 80 Fed Reg. 33425; June 12, 2015](#)).

The new rules will harm manufacturers that have overseas 2.948-listed labs in non-MRA countries, as they will incur substantial costs by having to relocate their testing facilities. Manufacturers that utilize non-affiliated 2.948-listed labs in non-MRA countries will soon need to make alternative arrangements or risk losing the ability to market their devices within the United States. In either case, product-development cycles could be severely disrupted, resulting in a substantial loss of revenue.

The ABCs of MRAs

Many manufacturers that utilize foreign testing labs, particularly those just beginning the international marketing process, are choosing to make the safe move of using labs located in countries that have MRAs with the United States. MRAs are basically government-to-government trade-facilitating measures, wherein the participating countries agree to accept the test results and/or device approvals performed by the other country's Conformity Assessment Bodies (CABs), based on the use of internationally accepted procedures. CABs include approved test labs and telecommunications certification bodies that perform conformity assessments to an importing party's technical regulations under the specific agreements.

The FCC participates in MRAs with the countries listed below. In general, these MRAs cover RF equipment, but certain nuances exist in the individual MRAs that should be understood concerning the specific information that may be accepted by the FCC for certification. For example, some MRAs are "Phase I," which means that the countries will mutually accept test data, while others may be "Phase II," which indicates mutual acceptance of equipment approvals.

Each of the following countries has an operational MRA with the FCC: Australia, Austria, Belgium, Canada, Chinese Taipei, Finland, France, Germany, Hong Kong, Iceland, Ireland, Israel, Italy, Japan, Liechtenstein, the Netherlands, Norway, Slovenia, South Korea, Sweden, Spain, the United Kingdom and Vietnam. The FCC has a non-operational MRA with Mexico. The United States and Mexico are currently engaging in an information exchange to make the MRA operational (see [EMC and Telecommunications Mutual Recognition Agreements](#)).

Petitions for Reconsideration

The FCC is currently considering petitions for reconsideration of the new rules. These petitions request that the FCC clarify procedures for the recognition of accreditation bodies that can accredit testing labs in non-MRA countries, provide clarification as to how 2.948-listed labs in non-MRA countries can be certified and provide a period of two years as a transition period for currently non-accredited labs to complete the certification process (see [Petitions for Reconsideration of Action in Rulemaking Proceeding, Public Notice, FCC Report No. 3030, Oct. 22, 2015](#)).

The Future Is Unclear

The FCC may or may not grant the pending petitions for reconsideration. Yet, even if the FCC does grant certain petitions, in whole or in part, it may nonetheless impose onerous conditions on the accreditation and certification processes, which could discourage labs from complying with the new requirements. Given the importance and material impact of the proposed rules, impacted manufacturers (and the entire IoT ecosystem) would be well-served to closely monitor developments.

Other issues exist with the proposed rules, which hopefully will be clarified by the FCC. For example, the agency has provided no guidance as to whether a company based in the United States or an MRA country that has a subsidiary located in a non-MRA nation may utilize that subsidiary's test data for certification purposes.

Moreover, while some non-MRA countries are engaged in talks with the United States to implement MRAs, many nations are simply not interested in pursuing MRAs, due to, among other things, concern for protecting their own manufacturing industries.

Accordingly, for RF equipment manufacturers that wish to conduct testing overseas and sell their products in the United States, it is imperative that they ensure the labs they are using are duly accredited, and that their test results are acceptable to the FCC. U.S. manufacturers that wish to market their products in a non-MRA country must, in most cases, test those goods in that specific country and receive approval from that nation's CAB.

Approval from a specific country's CAB is typically required for countries with MRAs with the United States, even if they accept the other nation's test data. There are a few exceptions; some countries accept FCC equipment approval as proof of compliance.

Conclusion

The regulatory challenges facing RF equipment manufacturers, as exemplified in this article, are complex, and new issues will arise as IoT adoption continues to proliferate. Consultation with knowledgeable consultants or counsel would be helpful to any manufacturer looking to avail itself of the opportunities in the emerging global IoT marketplace.

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