

A decorative graphic consisting of numerous thin, white, curved lines that overlap and create a sense of motion and depth, resembling a stylized wave or a network of connections. It spans across the middle of the page.

THE ROAD TO MARKET FOR RADIO AND TELECOMMUNICATION PRODUCTS.

Conformity evaluation – R&TTE, RED, Notified Body,
CE, FCC, IC and Bluetooth standards.

CONFORMITY EVALUATION – R&TTE, RED, NOTIFIED BODY, CE, FCC, IC AND BLUETOOTH STANDARDS.

The R&TTE Directive 1999/5/EC sets the regulatory framework for conformity evaluation.

Conformity Evaluation for Radio and Telecommunication Products in the European Union

The 30 billion € market for equipment covered by the European R&TTE (Radio equipment and Telecommunications Terminal Equipment) Directive 1999/5/EC is growing steadily. This Directive sets the regulatory framework for all radio equipment and terminal equipment connected to public telecommunications networks in the European Union. Essential requirements include health and safety, electromagnetic compatibility and radio spectrum usage. Manufacturers and suppliers of these products in the EU market must demonstrate compliance with the R&TTE Directive by providing a Technical Construction File (TCF), a Declaration of Conformity (DoC) and the CE Marking.

A Notified Body conducts and supports the conformity assessments of products.

The role of a Notified Body

Unless a manufacturer or supplier is very familiar with R&TTE procedures, working with a Notified Body is recommended. As an independent organization that has been nominated by the European Commission, a Notified Body conducts and supports the necessary conformity assessments. Where harmonized standards are applicable, a Notified Body carries out the procedure on behalf of the applicant and can verify the assessment and corresponding TCF. When harmonized standards deviate or do not exist, a Notified Body can create specific test plans and help to define the appropriate test suite.

In case of non-harmonized (country-specific) frequency ranges, a Notified Body can advise and support manufacturers planning to place their product into the market. A Notified Body can handle all the necessary notifications for all states of the European Economic Area (EEA).

Finally, a Notified Body can assess a manufacturer's TCF and issue an Expert Opinion (EO), a requirement for R&TTE compliance.

CE Marking

The EU introduced the CE Marking scheme to make trade easier and less expensive between EU countries. By affixing the CE Mark, the manufacturer claims that this product is compliant to all European Directives relevant to it.

CE 0682

Radio Equipment Directive is coming June 2016

The Radio Equipment Directive (RED) became effective on 11/06/2014 for the radio communications industry. Radio products within scope of must be compliant to the new RED starting June 13, 2016. Member states will transpose the RED into national legislation by 06/12/2016 for all products using the radio frequency spectrum, e.g. mobile communications equipment such as cellular telephones, citizens band radio, broadcast transmitters, car door openers, maritime radars, etc.

Global Market Access – Approval in countries outside the European Union

To offer a product in worldwide markets, certification schemes are applicable. Regulations vary from country to country. In the United States, the Federal Communications Commission (FCC) establishes regulatory requirements. The government agency for Canada is Industry Canada (IC). In Japan, the Ministry of Internal Affairs and Communications (MIC) takes care of approvals. Agreements on mutual recognition between the EU and other nations (US, Canada, Japan) designate independent laboratories as Conformity Assessment Bodies (CABs). These organizations take care of the conformity of the products to national laws and recognitions.

If the target market of a product includes nations outside the EU, US, Canada and Japan, International Type Approval (ITA) handling must be applied. An ITA expert monitors country and market-specific regulatory requirements. The expert also manages the nationally governed approval process to ensure the timely market entry.



Industry
Canada

Industrie
Canada

Focusing on radio standards – Bluetooth®

With low energy consumption and low manufacturing cost, Bluetooth is a popular radio standard for wireless connectivity. Bluetooth wireless technology is the global short-range wireless standard that meets the regulatory requirements for most of the world. The Bluetooth Special Interest Group (SIG) manages the Bluetooth technology evolution and oversees development of the specification, trademarks and qualification program. Devices with Bluetooth technology may not be offered for sale until the Bluetooth SIG listing is finished. There are several Bluetooth technologies available:

- Bluetooth Classic (Basic Rate)
- Bluetooth EDR (Enhanced Data Rate) as an option of Bluetooth Classic
- Bluetooth Smart (Bluetooth Low Energy)

Bluetooth Classic's (Basic Rate) purpose is to stream data when the power consumption, the data rate and the transmission time are not critical. When streaming video, faster data transfer rates are important and Bluetooth EDR is the right choice. The maximum data rate of Bluetooth Classic is 1 Mbit/s while Bluetooth EDR performs with 2 or 3 Mbit/s. Bluetooth Low Energy (BLE) prioritizes energy efficiency; it is ideal for capturing events or alerts by sending short bursts of data. With reduced power consumption, applications for BLE include building automation, remote control and fitness/medical devices.

Bluetooth Qualification

Before Bluetooth products can be legally offered on the market, two sets of approval requirements must be addressed.

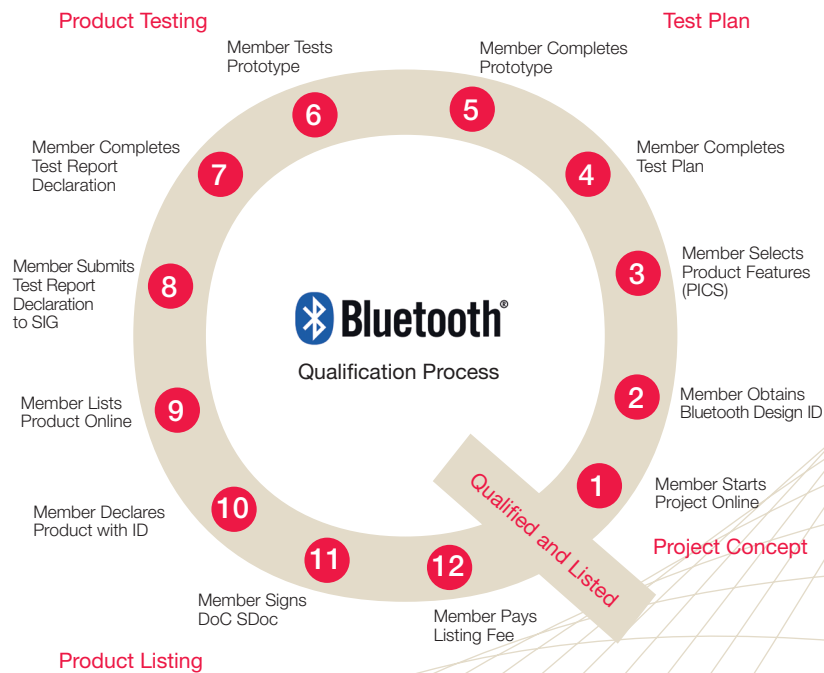
First, the product needs to be certified according to country specific requirements, such as FCC (Federal Communications Commission) for the North American market, the R&TTE Directive for the European Market, the IC (Industry Canada) for the Canadian market and the ARIB (Association of Radio Industries and Businesses) for the Japanese market.

If the target market of a product is outside the EU, US, Canada or Japan, International Type Approval (ITA) handling has to be applied.

Regulatory radio requirements

- European market: DIN EN 300 328
- US market: FCC Part 15.247
- Canadian market: RSS-247
- Japanese market: ARIB T-66

Second, the product or service must be qualified through the Bluetooth SIG's Qualification Program before it can bear the Bluetooth branding. The manufacturer must become a member of the Bluetooth SIG. This membership gives the opportunity to build products licensed with Bluetooth technology, to use the Bluetooth marks and become a part of the Bluetooth community.



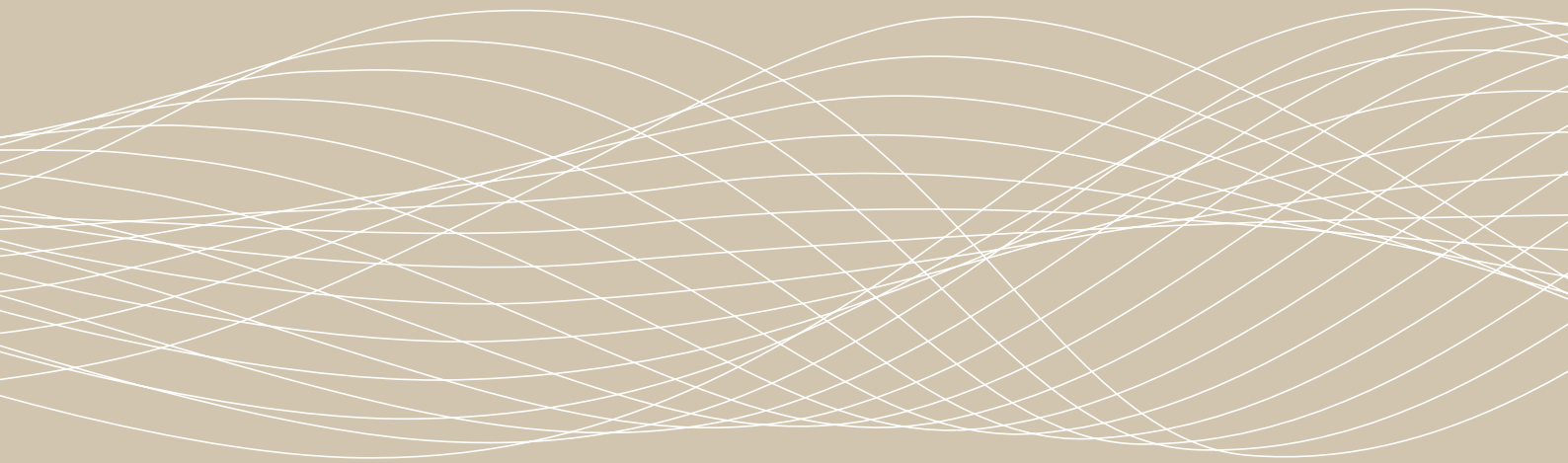
Source: Bluetooth SIG

After a manufacturer becomes a member, a project can be registered and listed online. A Bluetooth Design ID is created for the device. Based on the selected features (PICS), a qualified BQE (Bluetooth Qualification Expert) can generate a corresponding test plan. Upon successful completion, the results are submitted to the Bluetooth SIG. Upon payment of the listing fee, the Bluetooth device is officially qualified and listed.

For companies who are not familiar with the qualification and listing process, the Bluetooth SIG recommends that a Bluetooth Qualification Expert (BQE) should be involved with the product listing. This can eliminate errors in qualification and waive the random audit performed on listed products by the Bluetooth SIG.

The road to market for radio and telecommunication products might be challenging, especially for launching products globally. Adding external help through a Certification Body who guides companies to all relevant conformity requirements and registrations, can help to reduce the time to market.

Adding a Certification Body can reduce time to market.



ABOUT CETECOM

CETECOM is renowned as an independent industry partner for telecommunication technologies. With over 400 employees worldwide, CETECOM offers a series of services, which cover various technologies. Beside testing familiar standards like GSM, WCDMA, LTE, CDMA, Bluetooth, Wi-Fi and NFC, CETECOM also performs a wide range of consulting and testing of mobile software applications, OTA antenna, SAR, EMC, acoustics and batteries. In addition, CETECOM supports new developments in the markets of “internet of things”, especially for the domains of connected car and smart energy. CETECOM also participates in the development of global standards and test specifications.

CETECOM knows the Bluetooth industry, the Bluetooth SIG and its processes. As a Bluetooth Qualification Test Facility (BQTF), CETECOM offers the full scope of Bluetooth Qualification services, including pre-testing, protocol and profile testing, RF-conformance testing plus support and consulting during the entire listing process through a qualified BQE.

CETECOM's BQE assists members in checking documents and reports, listing products and in determining applicable test cases. CETECOM has a Bluetooth lab with state-of-the-art test equipment. Our custom, self-developed software has been certified by the Bluetooth SIG.