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CAT-iq 2.1 Certification Webinar

Global Technology for Broadband Home Connectivity

DECT Forum: Marketing Working Group

June 2019

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Agenda

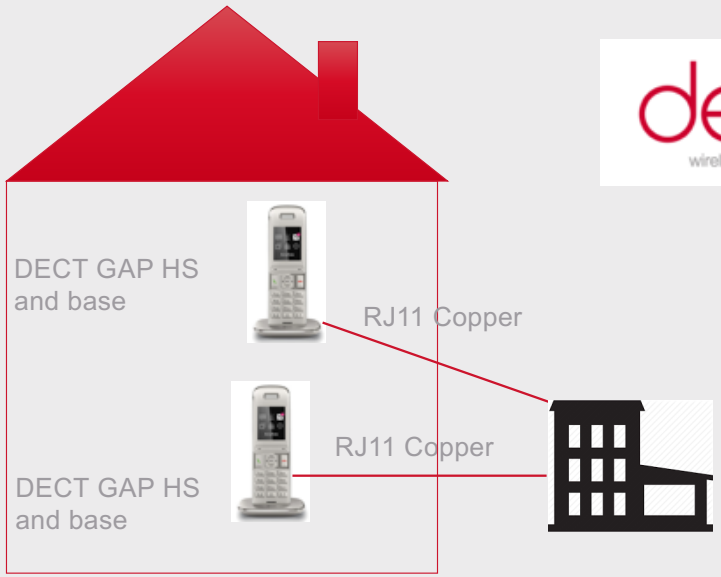
- What is CAT-iq ? The evolution of voice
- CAT-iq Value Proposition
- CAT-iq Profile Overview
- CAT-iq Certification Program Goals
- Certification:
  - Scope of CAT-iq 2.1, Usability improvements
  - Requirements and certification flow chart
  - Test and test window
- Certification: License structure
- HD Voice Logo License
- CAT-iq Deployment

What is CAT-iq?

Evolution of DECT Telephony

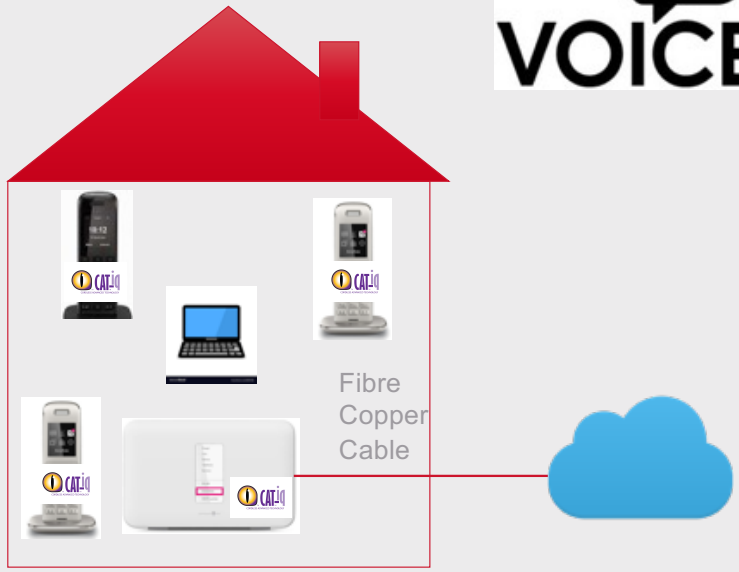
Before 2010

DECT GAP
- Narrowband RJ11
- Single Connection (Usually)
- GAP compatible
- No Interop between Manufacturers



After 2010

CAT-iq : VoIP for DECT (SIP functionality)
- Broadband via Home Gateway
- HD Voice with wideband G.722 Codec
- Multiple Lines Connection
- GAP compatible
- Interop between different Manufacturers



CAT-iq Value Proposition

- CAT-iq enables Voice over IP via DECT
  - The DECT radio has now migrated into the broadband Home Gateway
- CAT-iq offers HD Voice using the G.722 Codec
  - CAT-iq also offers the complete SIP feature set including Multiple Lines, Call Forwarding, Event Notification
- Certification programs for CAT-iq testing RF, Protocol Audio and Application Level Interoperability
- Enables a multivendor approach for carriers, creating a quality standard
  - Already in 100 Millions of European Home Gateways
- Easy Upgrade to smart home,
  - ULE devices use same radio
  - No extra infrastructure
  - Eco System exists

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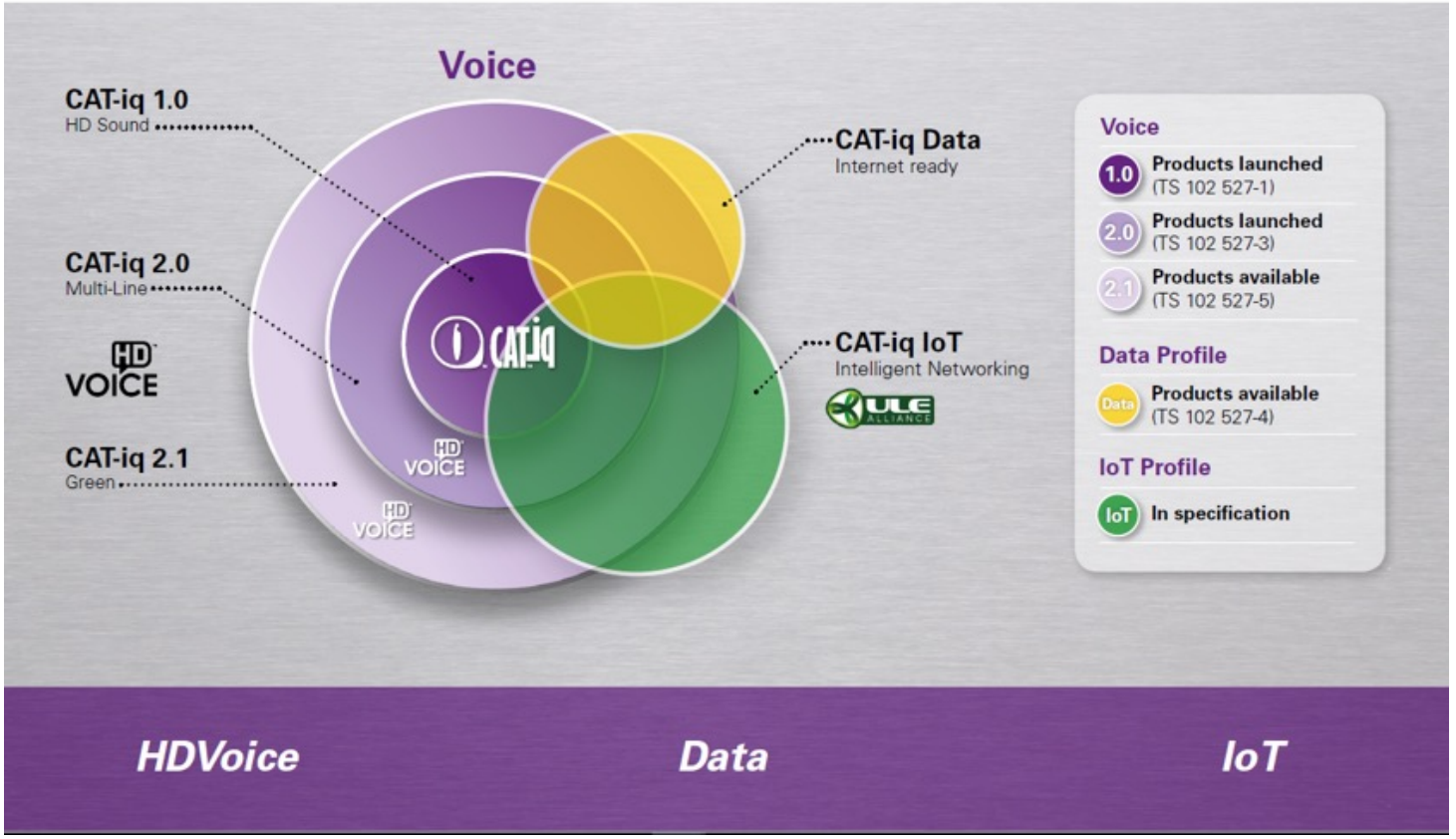
CAT-iq
CORDLESS ADVANCED TECHNOLOGY

Profile Overview



CAT-iq Certification Goals

- Creation of real value for members and industry alike
- Ensure common user experience with proof of conformity to a mandatory quality level for Audio, RF and Protocol (CAT-iq Standards)
- Retail promotion: A guaranteed level of application layer interoperability
- Promotion and Branding for the CAT-iq technology to all market stakeholders (end users, carriers, retailers)

Scope of CAT-iq 2.1 certification

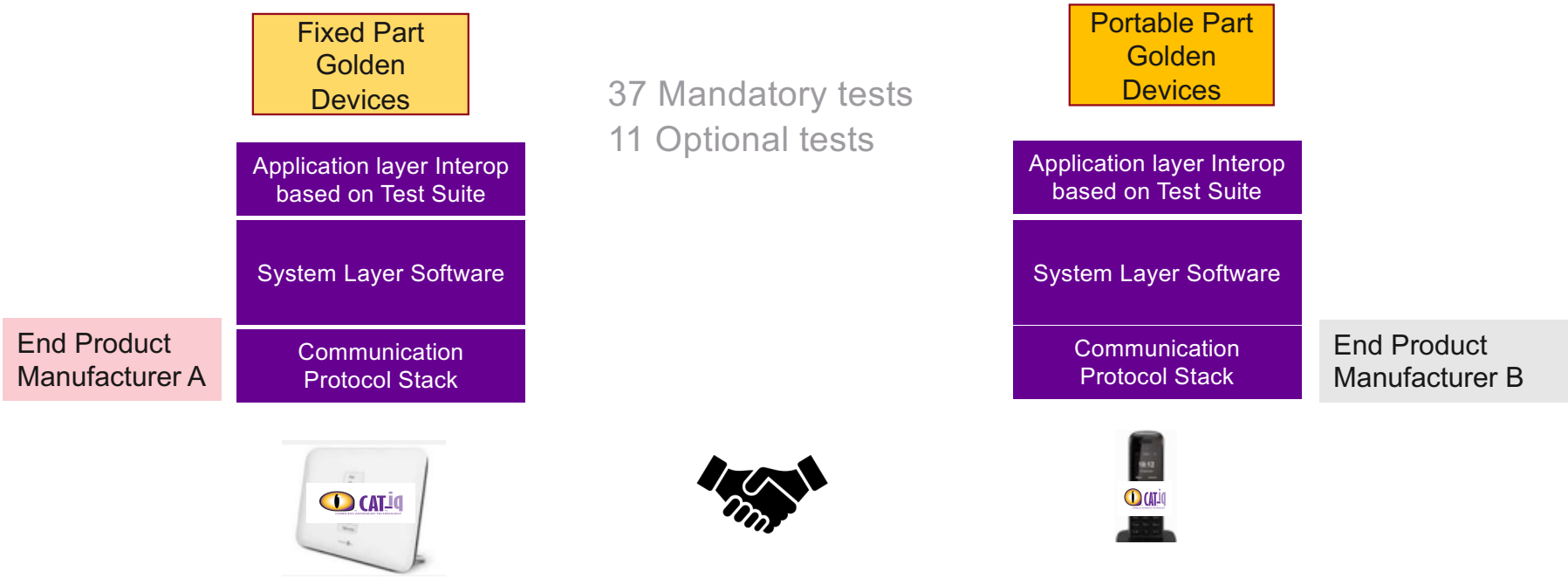
- Protocol - HD Voice:
  - Extends the operator feature set for HD Voice services
  - New features like 3-Party Conference Call, Call transfer, Power Saving, Call Intrusion,

- RF/ Audio: RF and Audio testing remains the same as in CAT-q 2.0

- CAT-iq Application Guideline/ Test Suite
  - Adding application tests that serve to improve user experience across different manufacturers
  - Includes a test bench in the certification program to test interoperability on a given set of functions
  - CAT-iq 2.0 Certified Devices only perform delta 2.1 protocol tests and application test suite

Usability Improvements

CAT-iq Application Test Bench



- Test Bench built according to CAT-iq Application Guideline
- Certifiying PPs will perform all tests against FP golden devices
- Certifiying FPs will perform all tests against PP golden devices
- All mandatory tests must be passed – Report sent to qualification lab
- Golden Device: CAT-iq mode containing all features necessary for certification

Pre-conditions for Certification

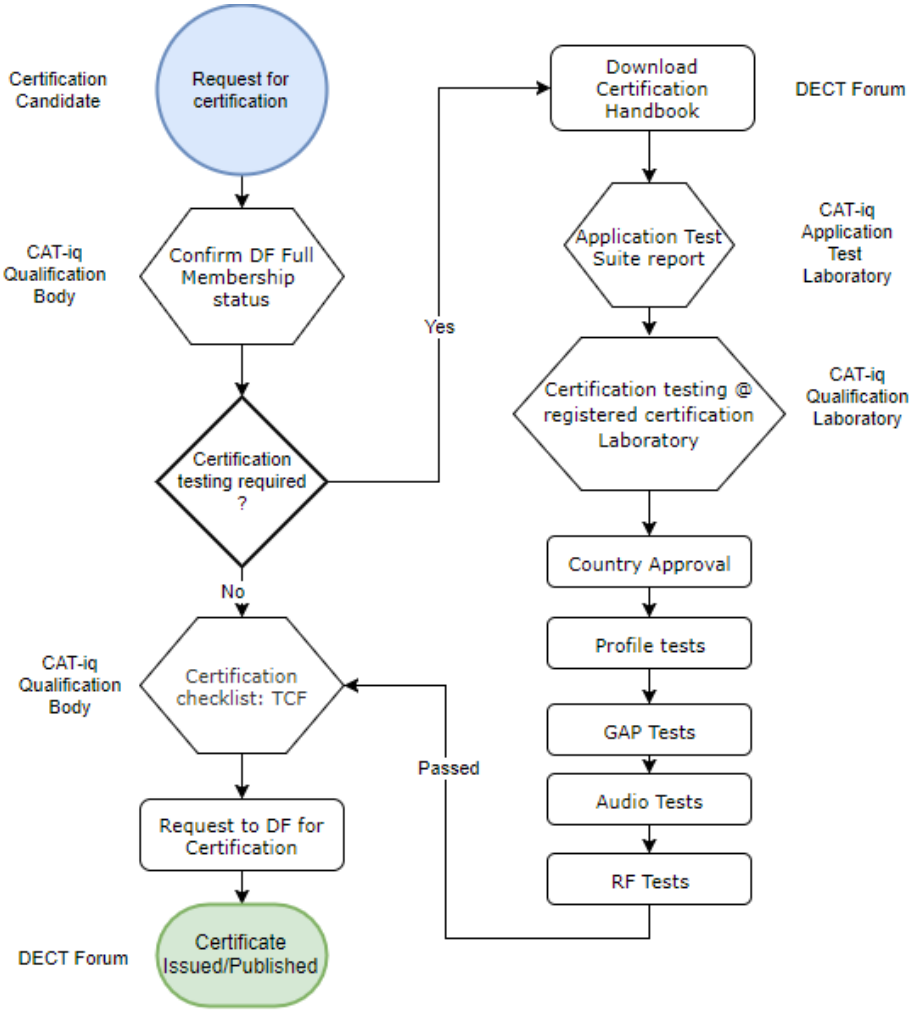
CAT-iq is a registered trademark owned by the DECT Forum, referencing features and procedures

Note*: Presenting company must be a Full Member of DECT Forum:

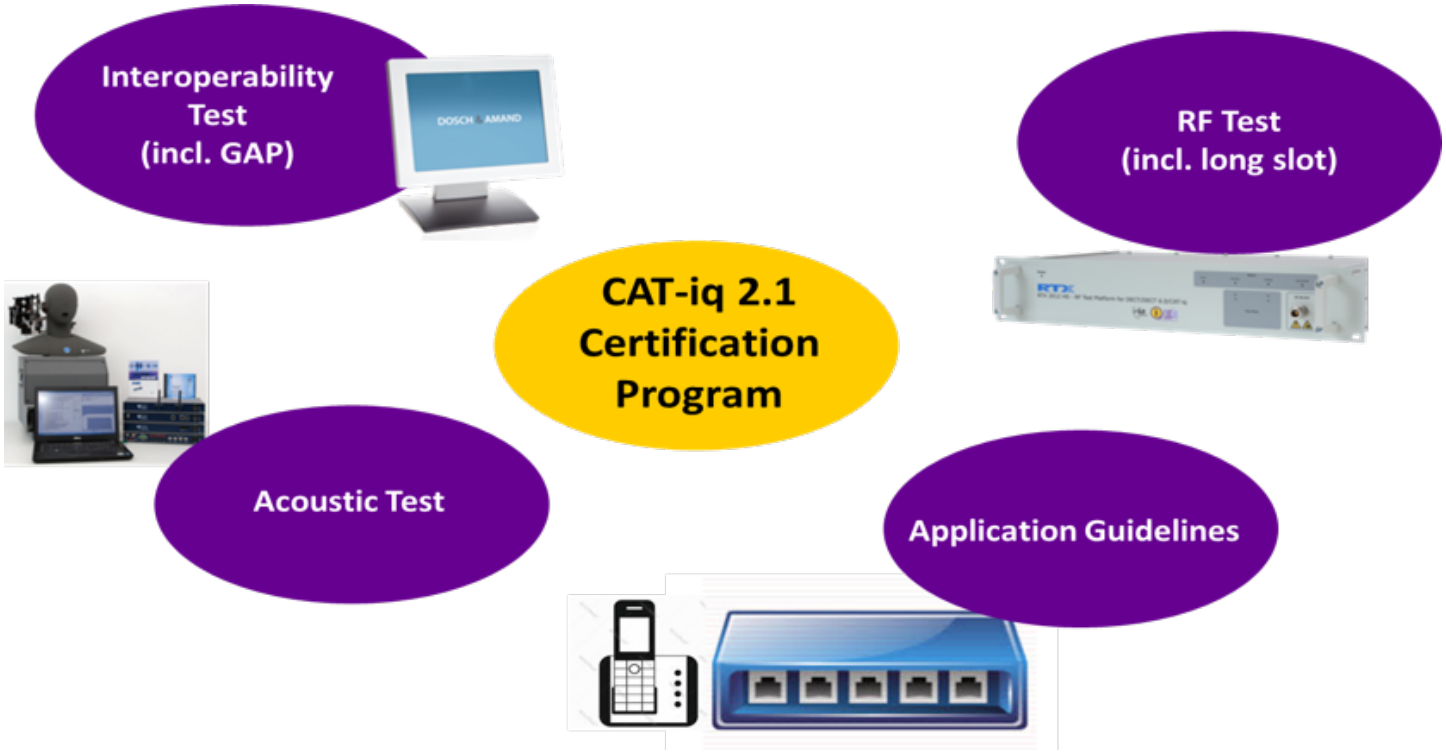
* Associate members sub contracting for a full member may also apply

A semiconductor chip-set supplier , design house or an operator member cannot be claimed as the FULL member.

Steps to CAT-iq 2.1 certification



CAT-iq 2.1 Certification Test Equipment



CAT-iq 2.1 Protocol Tester EU/US	CAT-iq 2.0 RF Tester	CAT-iq 2.0 Audio Test System
Hardware: DA1220(EN/US)	Hardware: RTX2012 HS	Hardware: ACQUA Compact CAT-iq 2.0 Test System
Identno. 1220.2200.20	Firmware: V.9.58 or newer	Code 6860.17
Release V1.8	Software V3.1.0 or newer	
Manufacturer: Dosch&Amand (Germany)	Manufacturer: RTX Denmark	Manufacturer: Head Acoutics (Germany)
www.dosch-amand.com	www.rtx.dk	www.head-acoustics.de

Certification Window

- Opening of CAT-iq 2.1 Certification Window: End June 2019
  - Protocol, RF and Audio
  - Application test bench

- Test Duration (non binding estimate)
  - Protocol, Audio, RF: 1-week test
  - Application Test: PP: 2 days, FP: 3 Days (Please adhere to PIXIT questionnaire)

- Certification Bodies
  - CTC Advanced:
  - Nemko

- Certification Labs:
  - CTC Advanced and Nemko for RF, Audio and Protocol
  - Arendi for CAT-iq Application Guideline and Test Suite

Certification License Structure

- License Fee is payable to the DECT Forum prior to issuing the certificate.
- DECT Forum will use the fees generated from to contribute to the protection of the CAT-iq trademark.
- **Note that this license fee is independent of any certification fee payable to the test house.**

- **Original license**
  - 3,000 CHF Per set
  - 2,000 CHF Per device, e.g. base or handset
  - Full tests to be run, covering RF, Acoustic & Profile

- **Product variant license**
  - Original ODM/OEM Product has been certified already.
  - Product is sold in SAME housing and SAME PCB/Components under a DIFFERENT product name.
  - Colour variations are defined as same housing.
  - No software changes other than in MMI/GUI allowed (icons or text)
  - 1,000 CHF per variant

- **In-line upgrade license**
  - Original ODM/OEM Product has been certified already.
  - Product is in market deployed
  - Firmware upgrade roll-out
  - 1,000 CHF re-testing per single device

Certification License Structure (cont‘d)

- **Re-testing license**
  - Original ODM/OEM Product has been certified already.
  - Product is sold in
    - DIFFERENT housing or
    - DIFFERENT PCB (Size or components)
    - DIFFERENT software.
  - Only the parts of the system which are affected by the effective change require re-testing e.g. change in housing (and no software changes other than MMI/GUI) only the acoustic test has to be re-tested
  - 1,500 CHF re-testing per set
  - 1,000 CHF re-testing per single device

- **Logo usage license**
  - Original ODM/OEM Product has been certified already.
  - Product is sold in SAME housing and SAME PCB/Components under a DIFFERENT product name.
  - Colour variations are defined as same housing.
  - No software changes other than in MMI/GUI allowed (icons or text)
  - No additional fee

- Note that in the case where a Full member of the DECT Forum submits a product for certification on behalf of a brand/manufacturer or operator who is an Associate or Full member, then said brand/manufacturer or operator can select to be shown on the public product certification listing

HD Voice Logo License

- HD voice is a logo, licensed by GSMA, with the intention of supporting one HD Voice logo, that can become a universally recognised symbol which easily identifies HD Voice enabled services and devices, across both mobile and fixed networks.

- The DECT Forum has entered into a cooperation agreement with the GSM Association (GSMA), where CAT-iq 2.0 certified devices will be able to benefit from the use of the GSMA HD Voice logo.

- The GSMA license program, through its technical annex, will refer to CAT-iq 2.0 specifications as minimum requirements for fixed HD devices

- FULL DECT Forum members, who have CAT-iq 2.0 certified products can apply to the GSMA for use of the logo via the license agreement. There is no additional fee applied. Relevant documents can be found here
  - The Minimum Requirements document
  - The Licence Agreement
  - The HD Voice Logo Usage Guidelines and FAQ

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Trademark

Broadband Technology for New Services and Devices

CAT-iq IS A REGISTERED TRADEMARK IN 47 COUNTRIES WORLDWIDE

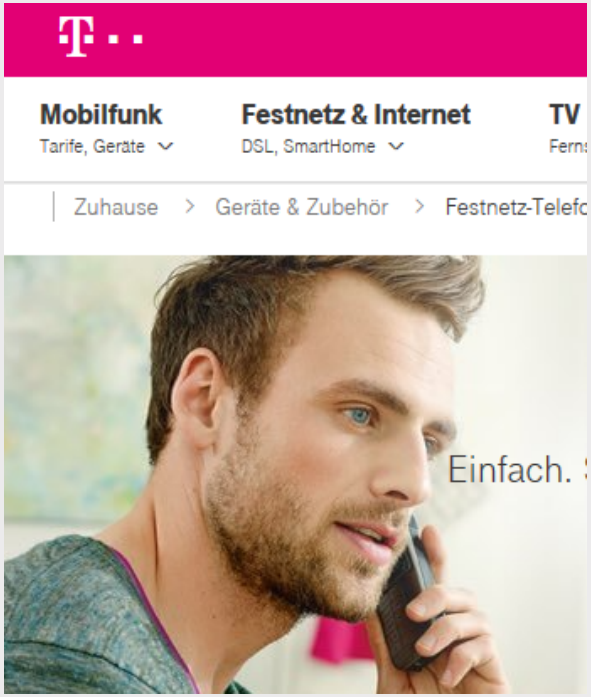
European Union: 25 countries

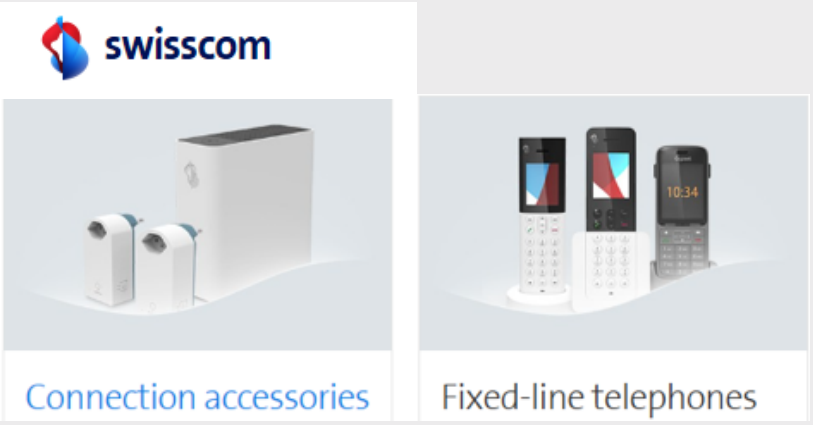
Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Great Britain, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxemburg, Malta, Netherlands, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden

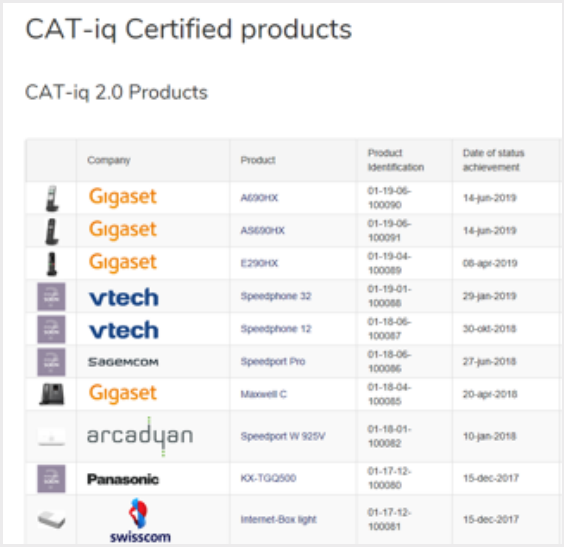
Additional Applications: 22 countries

Australia, Belarus, Bosnia-Herzegovina, Bulgaria, Canada, China, Japan, Croatia, Liechtenstein, Macedonia, Monaco. Montenegro, Norway, Romania, Russia, Serbia, Switzerland, Singapore, South-Korea, Turkey, Ukraine, USA

CAT-iq Market Deployment







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Thank you for your participation