QiTASC

the magic of E2E testing

Watch the presentation: https://youtu.be/TwbW_LKAERM

All in One = INTACT®
Extreme Automation
Easy to Understand & Reliable
Safe Time & Money
Transparency = Take the right decisions
Full Stack Automation
Professional Service and Highest Quality

www.qitasc.com
Key Task: Providing & keeping high quality

- Automating and validating the digital processes and scenarios end-to-end
- Developing the necessary tools required to keep high quality
The many possible Areas of working with intaQt®

- VoIP-Phone Automation
- Attenuator Automation
- Trace Integration & Automation
- APP-Android Automation
- APP-Tablet Automation
- PC-Client/ MacOS/ Windows Automation
- Mobile Device Automation
- Remote Access Automation
- Roaming Automation
- IoT Automation / Mechatronics
- Backend, IF, Automation/ Emulation, SOAP, REST, Ldap, SQL, ssh, sftp,...
- Web-UI Automation
- Automated Reporting (HP-ALM, Jira, ...)
- Automated Data Correlation & Verification
- Protocol & Network Simulation. CAP, Diameter, SIP, ...
Digital products require continuous integration – High request for increased technical abilities

→ More complicated systems to be tested

Tighter time to market

→ Quality at Speed

⇔ A need to increase the efficiency of IoT testing!
Goals

• ensure that the devices work properly
• ensure that they communicate with their apps correctly

Challenges

• IoT device automation requires physical interaction
• multicontext frameworks, hard to automate E2E within one scenario:
  • IoT devices
  • apps
  • web UIs
  • backend systems
  • gateways
  • network elements
  • etc.

Business Case: IoT

IoT Test Automation
IoT Devices

Actuators, sensors:
- Press button
- Move sensor
- Capture trace
- Switch on power
- Read display
- ...

We developed housings in which we integrate actuators, sensors, motors, fans, etc. to enable physical interaction with the IoT devices.

IoT Device automation requires an electronic layer and a mechanical layer.

Electronic layer to control actuators, sensors, etc.
Development of IoT Setup

Behind the scenes: https://youtu.be/R7rJyTpgSdw
intaQt® Automation SetUp for IoT (3 devices)

- Backend Server
- Access / Core Network
- Network Domain
- Device & Gateway Domain

- M2M Area Network
- Thermostat
- Motion Sensor
- Smoke Sensor
- Heat Device
- Sensor Y
- Motion Device
- Smoke Unit
- Raspberry Pi Control Unit
- Test adapter

- Provisioning / Home Automation Config via APP
- Remote Control

- intaQt® Automation Server

QiTASC GmbH
With QiTASC IoT Test Automation Framework:

- easier to repeat the tests
- quicker to find the defects
- quicker to go to market
QiTASC IoT Test Automation Framework

Smart Infrastructures in Vital Roles to be Tested End-to-End Intelligently

• wearables
• smart cameras
• smart meters
• smart payment technologies
• smart surveillance
• mobile & desktop applications
• broadcast streaming and signal quality
• face recognition technologies
• non-touch solutions
• kiosks
• various other sensors and processes…
intaQt® Smoke Detector Automation Demo Video

IoT test case: https://youtu.be/YT53dmwpoqA
QiTASC GmbH

QiTASC Footprint

Proven Success

- Dublin
- Reading
- Düsseldorf
- Brussels
- Heerlen
- Cologne
- Madrid
- Eschborn
- Praha
- Vienna
- Milano
- Ankara
- Athens
Few References to prove our success

<table>
<thead>
<tr>
<th>Company</th>
<th>Services</th>
</tr>
</thead>
<tbody>
<tr>
<td>TÜV Rheinland®</td>
<td>Internet of Things Testing</td>
</tr>
<tr>
<td>Vodafone</td>
<td>CDR Verification for CS and PS Core Network</td>
</tr>
<tr>
<td>Türk Telekom</td>
<td>VoLTE, 5G, Voice, SMS, USSD, Data</td>
</tr>
<tr>
<td>Atos</td>
<td>Service Testing &amp; Network Verification</td>
</tr>
<tr>
<td>Vodafone</td>
<td>VF-UK, VF-IRL, VF-ESP, VF-ITL, VF-CZ, VF-Ziggo</td>
</tr>
<tr>
<td>Proximus</td>
<td>VoLTE, 5G, Voice, SMS, Data</td>
</tr>
<tr>
<td>A1 Telekom Austria</td>
<td>CCS OCS, together with ATOS</td>
</tr>
<tr>
<td>TeliaSonera</td>
<td>Vodafone Group Services ONB Testing</td>
</tr>
<tr>
<td>Capgemini</td>
<td>Consulting &amp; IN-Services</td>
</tr>
<tr>
<td>imei</td>
<td>IMS Core Network Verification</td>
</tr>
<tr>
<td>intaQt®</td>
<td>License &amp; Automated Test</td>
</tr>
<tr>
<td>SEVEN PRINCIPLES</td>
<td>Testing Centre of Excellence</td>
</tr>
<tr>
<td>Polygons</td>
<td>Train Logistics SW Test</td>
</tr>
<tr>
<td>educom</td>
<td>Connectivity Test</td>
</tr>
<tr>
<td>Vodafone</td>
<td>Type and Field Acceptance for Converged Charging</td>
</tr>
<tr>
<td>Vodafone</td>
<td>VF-GER</td>
</tr>
</tbody>
</table>

QiTASC GmbH
Thank you!

Gamze Ugur Tuncer
Marketing & Sales Key Accountant

gamze.ugurtuncer@qitasc.com
www.qitasc.com
+43 699 17052538