



Automated testing for **everyone**

Mirko Nedeljkovic

How it all started







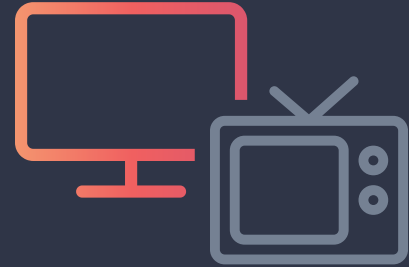
Our device situation



1 few test devices

2 customer expectations

3 device cost higher than project value



1 few test devices

2 **customer expectations**

3 device cost higher than project value



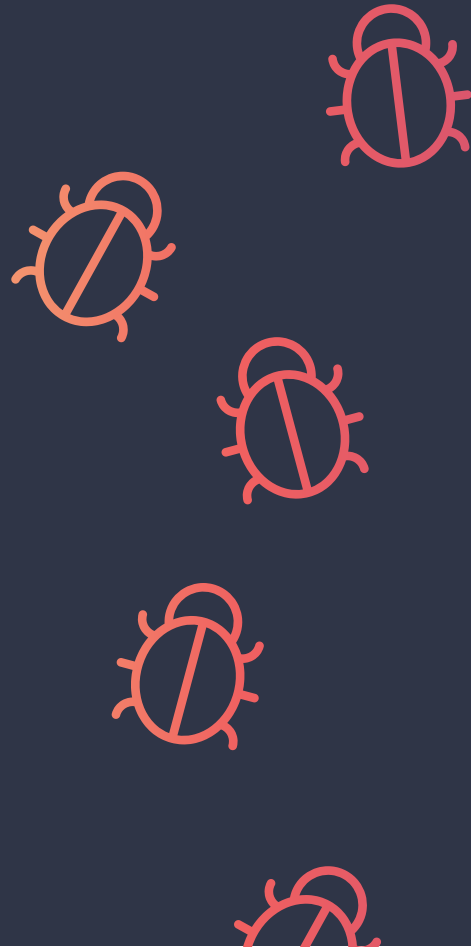
- 1 few test devices
- 2 customer expectations
- 3 device cost higher than project value**



Sounds bad?
It got **worse**



wasted time and
overlooked bugs



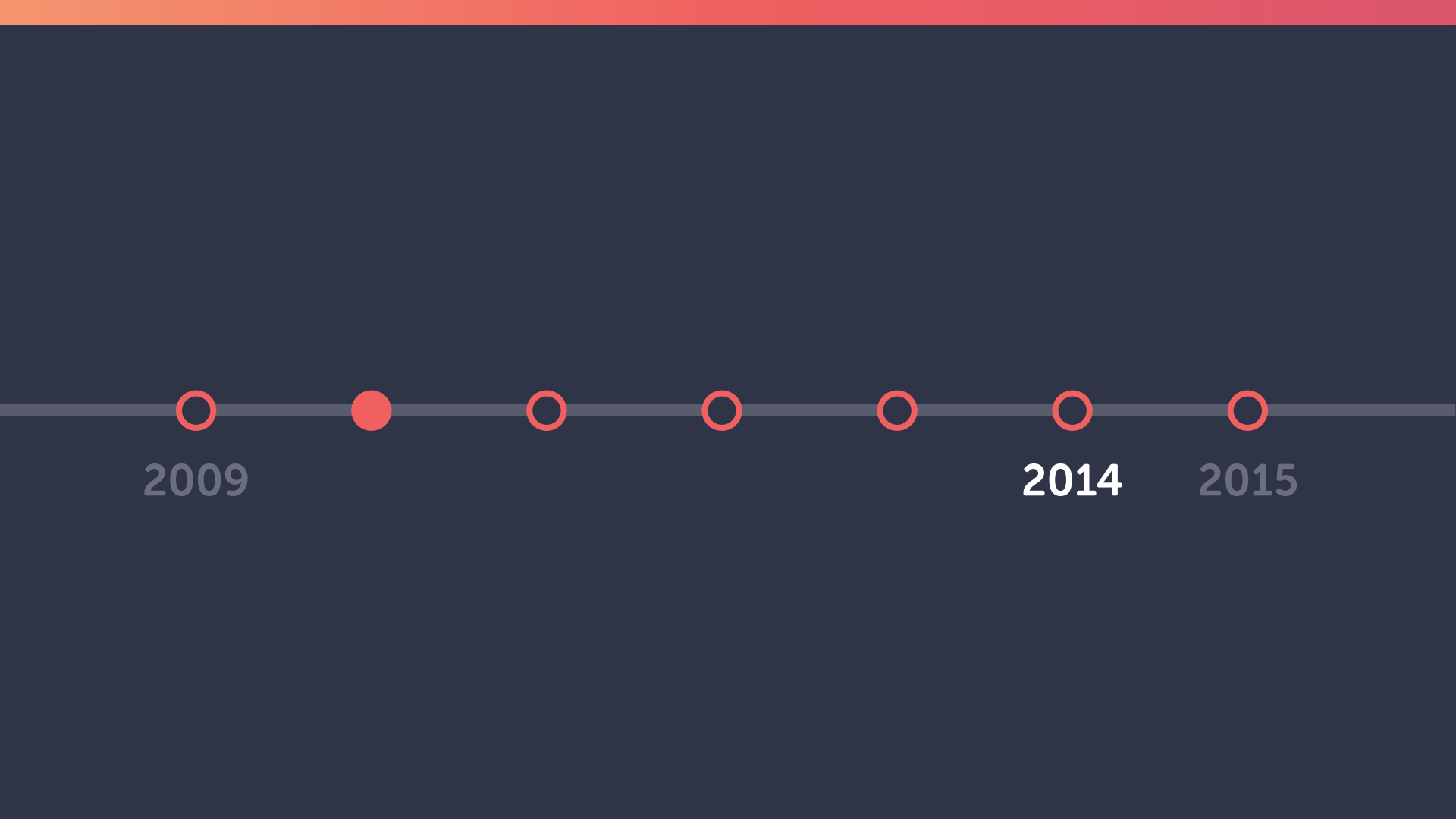


not enough TVs
not enough developers
not enough budget

Fail #1

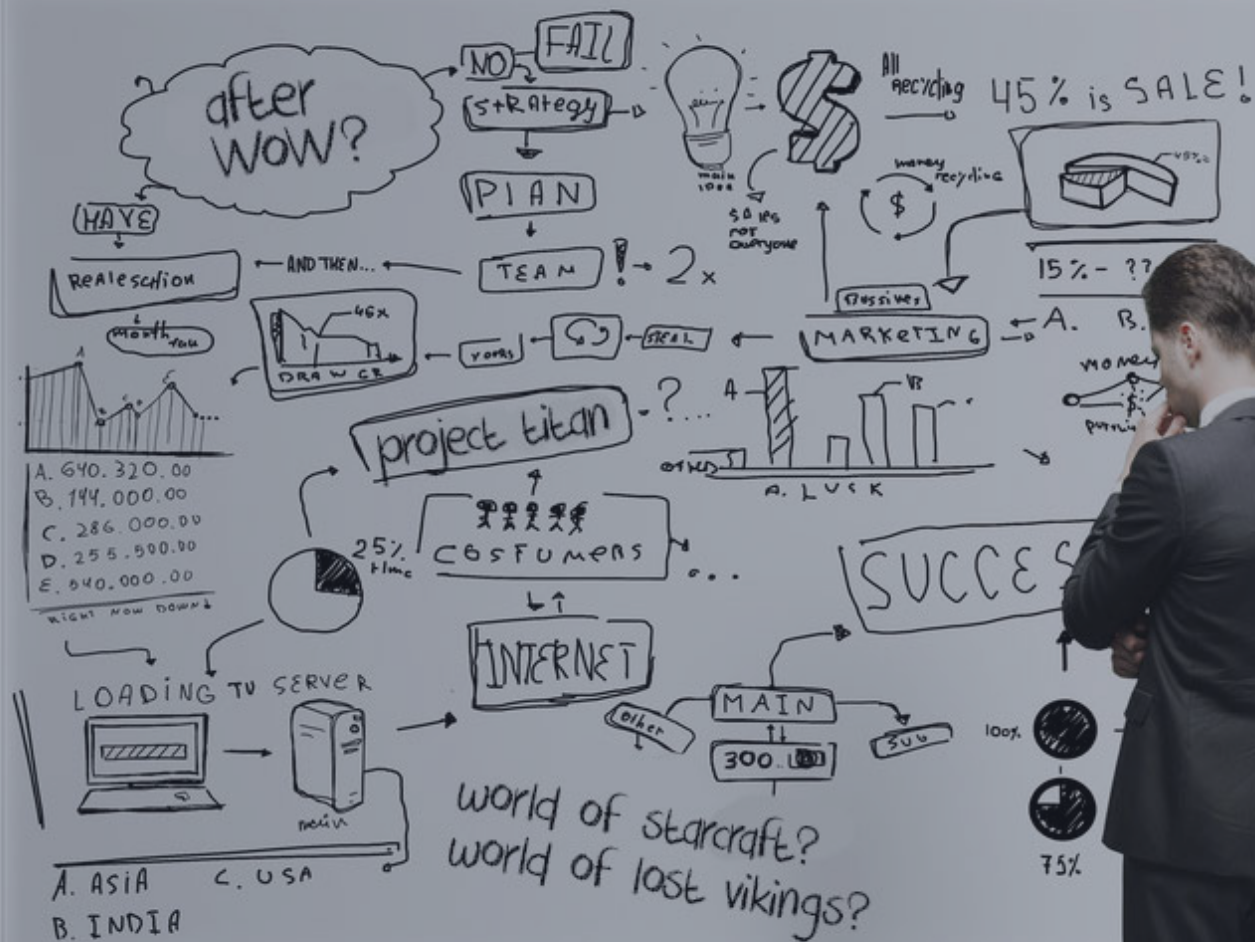


= inefficient :(



Something had
to change





Our requirements



- ✓ No or almost no involvement of developers in the QA process.
- ✓ Creating and running test cases must not require development skills.
- ✓ The suite must work on any HbbTV compatible device

- ✓ Running the tests must be fast
- ✓ Tests should be possible to run on remote devices.
- ✓ Tests should be possible to run on any number of devices simultaneously.

First approach



Extensive market research

The result?



No suitable solution
on the market

The bad



Adapting an existing solution
for the web to HbbTV using
simulated user interaction

The ugly



Lot of effort was burned
during the initial approach

Fail #2



Our adaptation only worked
on 6 out of 12 devices

Fail #3



Actual usage was
way too complicated

Valuable insight



never resort
to simulation



everything about
the environment
must be real

NOT SURE IF TO GIVE UP

OR TRY HARDER



Back to the **drawing board**



Second approach

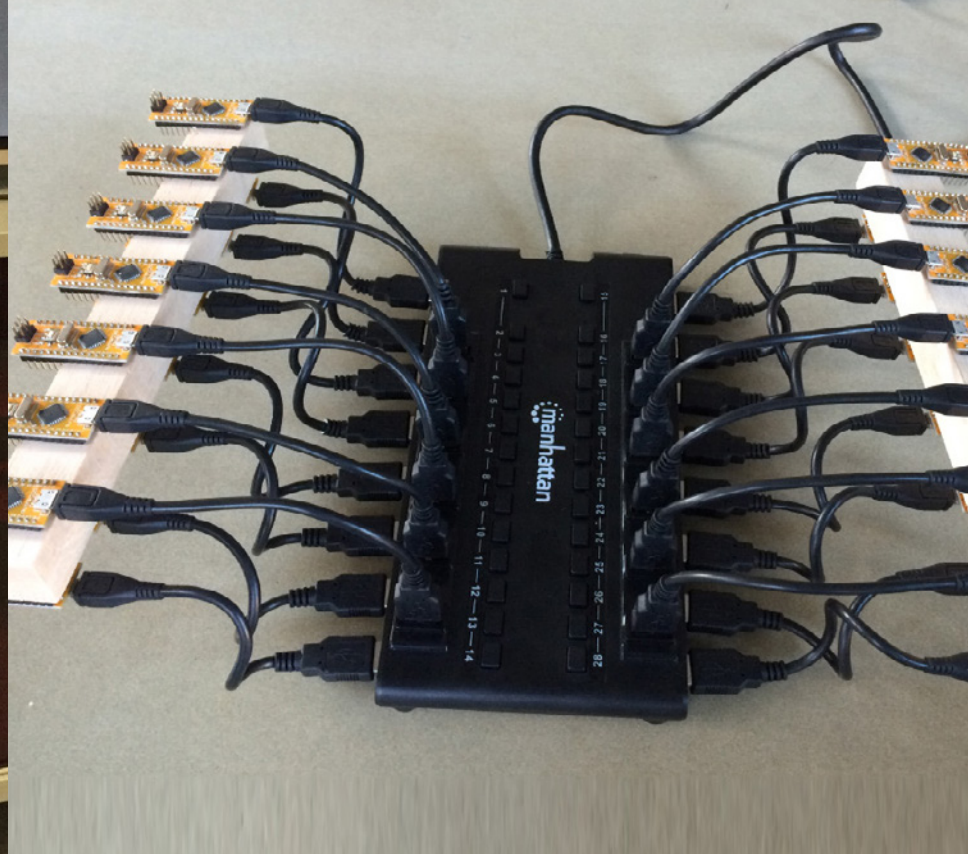


The app is tested
on real devices

Input undistinguishable
from a real user

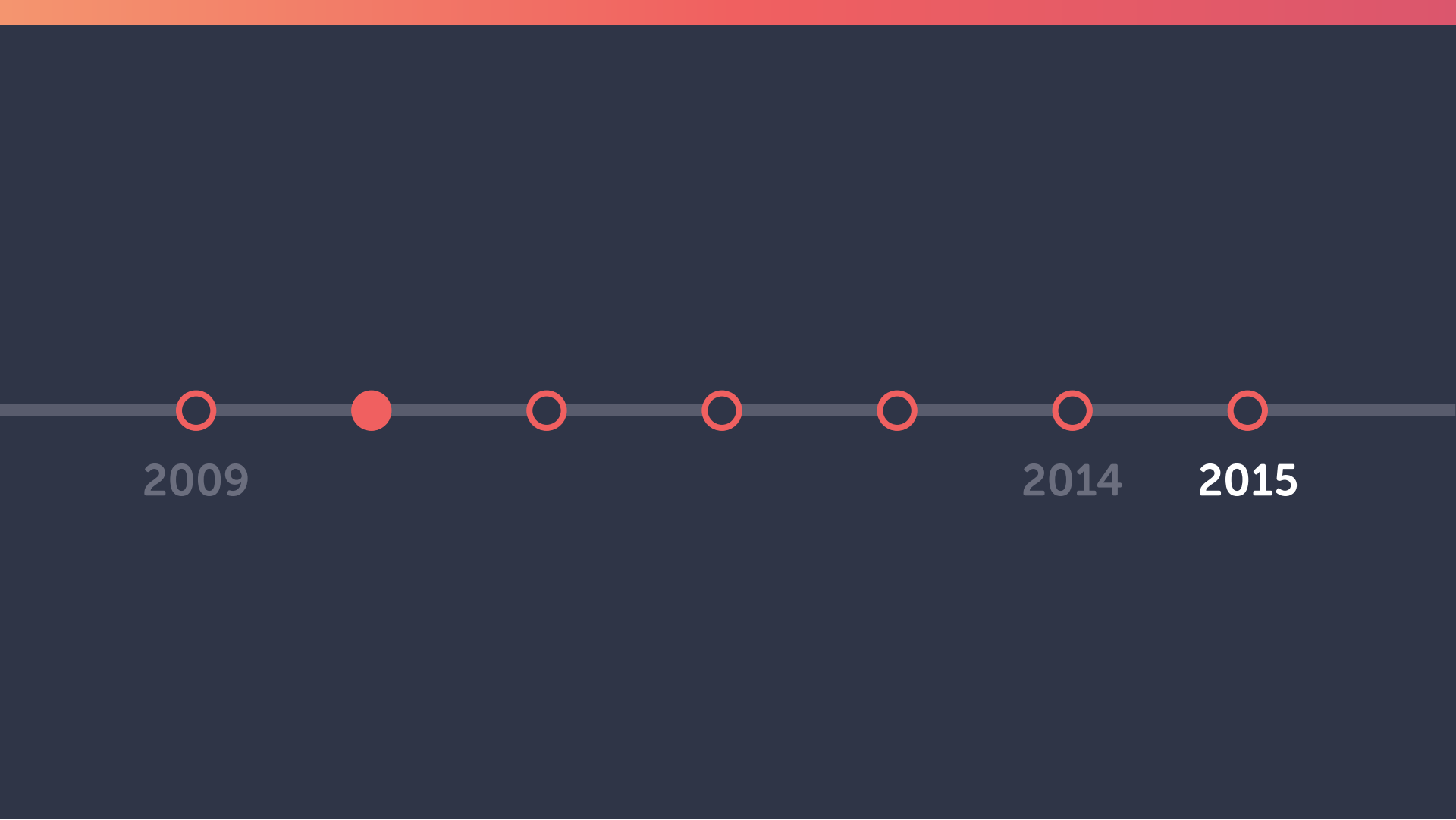
Tested and operated under
the exact same conditions
and manner as the
real user will

Hardware for IR
and alternative input
needed inhouse development



steampunk style

All software components
developed from scratch



Success



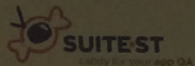
HbbTV and SmartTV
devices supported

Testing apps using
real devices

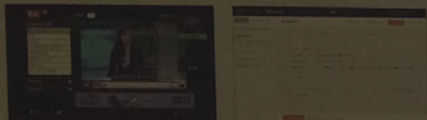
No test scripting
needed

5TH FOKUS MEDIA WEB SYMPOSIUM

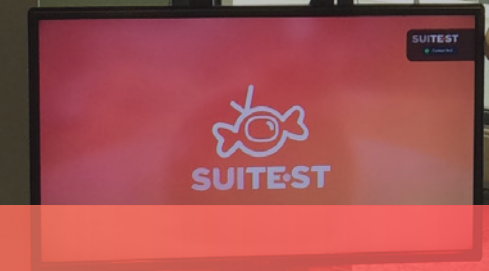
Berlin, May 29 - 31, 2013



SUITEST
candy for your app QA



- A streamlined application to remotely test Connected TV applications across hundreds of connected TVs and set-top boxes on the market
- Cuts costs by saving hundreds of man-hours on QA testing
- Suitest uses remote "device zoo" to eliminate the need to purchase expensive devices for testing purposes
- Drastically reduces the likelihood of human error
- Provides essential feedback to manufacturers about the compatibility, functionality and speed of applications on their specific devices, and can compare this across their own - and their competitors' - devices
- By streamlining the testing process remotely, suitest allows applications to enter into the market faster - ahead of the competition



First public presentation @ MWS in May

ÜBERSICHT NEWS SPORT VIP SERVICE



Klopp: Liverpool versucht alles!



2. BL-Traditionsduell am "Betze"



DFB: Schiri Kempter degradiert!

SPORT BVB: Reus und Bender sind zurück
BMG: Eberl lässt Zeitplan offen!
ENG: Costa droht böses Nachspiel

SPORT B'ball: Nowitzki stützt Schröder
F 1: Inläufer muss vor Gericht!
Tennis: Kerber startet siegreich



AUSBLENDEN STARTLEISTE

1 - DATENSCHUTZ 0 - IMPRESSUM



SUITE.ST

candy for your **app QA**

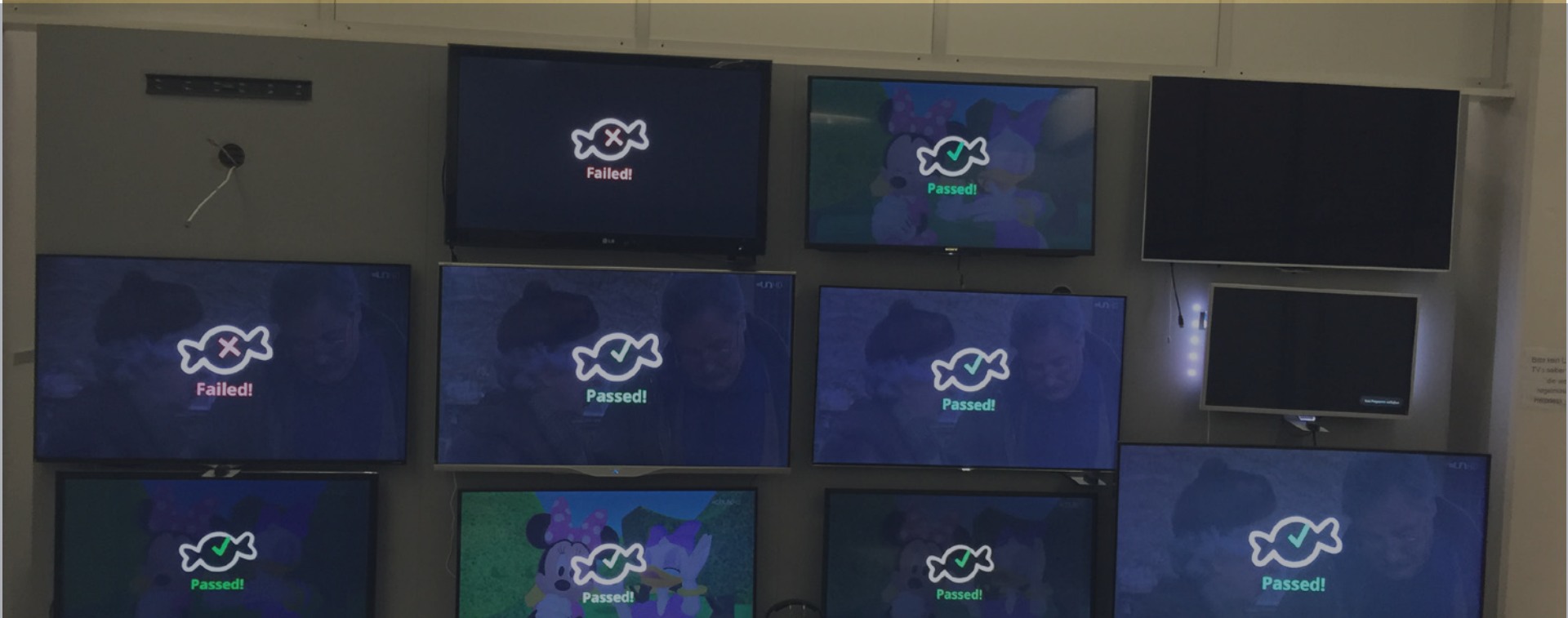
Automated testing of
Smart TV apps has
never been sweeter

 suite.st

Second public presentation @ TC Disrupt SF in September

Test on any Smart TV platform

Open WebOS, HbbTV, Android TV



First customer installation
@ SWISSTXT in November

How does it work





+ Create test

Hockey 2015 test



Schedule

Run with preview



Save changes

Playing and adding video to fav...

Hockey 2015 test

Deactivated test

Object size test

Background color test

Sync Mode **ON** Turn OFF to manipulate with the test conditions directly. Turn ON to sync with the app on your connected TV.✓ 1 Go to <http://ftd.mineus.cz/videocenter?appid=76d8...>


✓ 2 Press OK

3 Press 8



4 If element action then continue

5 If **element(1)** has

- background color = **#F00000**
- font color = **value**
- image =  <http://ftd.mineus.cz/videocenter?appid=76d8...>
- height = **140px**
- width = **250px**
- top = **293px**
- left = **638px** +

then **continue**

6 Press RIGHT

7 Press RIGHT

! 8 Press OK

9 Wait until **current location** = <http://ftd.mineus.cz/videocenter?appid=76d8...>

**The wait is over,
we are live!**



Free trial access

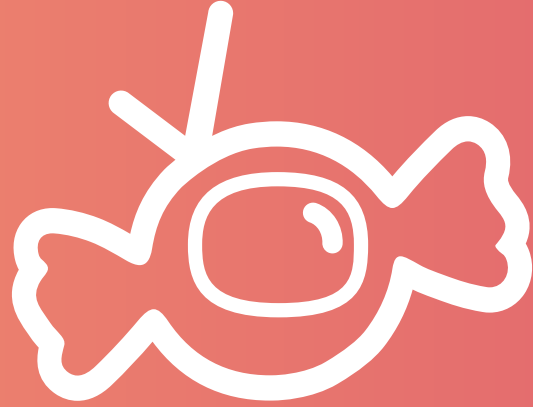


Broadcasters and manufacturers
can get their hands on Suitest
for free for a limited time

Public version



We will soon
open the platform
to everybody



Test your apps the
sweeter way