

# TECH THIEF

When Chinese tech giant Huawei was told it could not license or buy a phone-testing robot from US mobile services provider T-Mobile in 2012, it decided to steal the device, known as Tappy. What followed was an international corporate espionage drama that played out in internal Huawei e-mails, according to US prosecutors. The following is a snapshot of some of the exchanges:

**Date:** May 2012  
**From:** R.Y. (Huawei USA director of technical acceptance)  
**To:** engineers@huawei  
**Subject:** License TMO robot

Asked about licensing or purchasing Tappy, but TMO said no. They have no plans to sell the robot system to any phone manufacturer, including Huawei.

**Date:** November 2012  
**From:** J.Y. (Huawei China engineer)  
**To:** ry@huawei  
**Subject:** Reminder

This e-mail is just a kindly reminder for the information we need to build our own robot system and kindly feedback the information we need in the attachment...

**Date:** November 2012  
**From:** R.Y. (Huawei USA employee)  
**To:** jy@huawei  
**Subject:** Re: FWD: Reminder

Huawei USA engineers have accessed the robot lab... They know how TMO robot works and system info. I asked them to write down the info in detail and then send to Huawei China.

**Date:** December 2012  
**From:** R.Y. (Huawei USA employee)  
**To:** jy@huawei, engineers@huawei  
**Subject:** Follow up

We got not much information from TMO on these questions that you guys asked. Again, TMO won't want to share any more information about their robot system with us. However, we still try to find more information during our test in TMO robot lab. But won't expect any time soon.

**Date:** December 2012  
**From:** J.Y. (Huawei China engineer)  
**To:** ry@huawei, ax@huawei, usa@huawei, engineers@huawei  
**Subject:** xDeviceRobot issues

We are still working on the Robot system and we had some issues with the system at the moment. More information on Tappy is

needed. Are software test strips optimised for each device? What is Tappy's touch speed? How is the rubbed tip installed? Is there air space in the rubber tip?

**Date:** March 2013  
**From:** H.L. (Huawei USA engineer)  
**To:** fw@huawei  
**Subject:** Re: xDeviceRobot update

Gathering info from TMO is risky. I recommend contacting the robot manufacturer instead. Going through TMO would only backfire, especially after signing a confidentiality agreement at the TMO laboratory, the relevance of this information to us is very sensitive.

**Date:** April 2013  
**From:** J.Y. (Huawei China engineer)  
**To:** ry@huawei, ax@huawei, usa@huawei, engineers@huawei  
**Subject:** xDeviceRobot – further difficulties

We are still not on par with TMO robot. Please send more information about calibration standards, delay calculations and software.

**Date:** April 2013  
**From:** R.Y. (Huawei USA employee)  
**To:** jy@huawei, engineers@huawei  
**Subject:** Re: xDeviceRobot – further difficulties

First of all, I am glad that HQ R&D has been continuing to improve the Huawei robot system. Based on the test on TMO's phone, we do see a big difference of test results between TMO robot and Huawei robot.

I think we have a lot of work to improve our robot performance. The difference between the two is not only the hardware but also (most importantly) the software. TMO has spent much more money on software than hardware.

Once again, we can't get any further information about TMO robot system from TMO. They have complained to us a lot about this because we asked them too many questions of the robot based on HQ's request.

TMO said to me that if we ask them again such questions, they won't allow us to use their robot Lab. TMO has set up a security system by putting camera into the robot Lab. I think everyone knows what this means. We can't provide any further information to HQ because we can't get anything from TMO.

Once again, I suggested HQ to send an engineer to TMO for a hands-on experience by playing the robot system. I believe this would give HQ robot team a huge benefit in understanding TMO robot system from hardware and software, as well as operation.

**Date:** April 2013  
**From:** Huawei USA Executive Director of Technical Acceptance  
**To:** jy@huawei, ry@huawei, engineers@huawei  
**Subject:** Re: Re: xDeviceRobot – further difficulties

Access to Tappy by our engineers on the ground is strictly controlled. They are limited to usage of TMO's robot, and everything else is categorically denied.

Due to answering headquarters' questions, our employees have had two complaints raised against them, and it was declared that if we inquired again, Huawei's credentials for using the TMO Robot Laboratory would end. I echo previous suggestions to send an engineer from headquarters to see Tappy in person.

**Date:** April 2013  
**From:** F.W. (Huawei China engineer)  
**To:** Huawei USA Executive Director of Technical Acceptance  
**Subject:** Trip to Washington

There are a number of goals for my trip to T-Mobile HQ, but mainly – Collect detailed technical data on Tappy hardware and software.

Take photos and videos.

For the mechanical arm issues, go to the laboratory for reconnaissance and obtain measurement data.

I expect to arrive in Washington on May 11.

**Date:** May 2013  
**From:** F.W. (Huawei China engineer)  
**To:** engineers@huawei, usa@huawei, Director of Device Testing Management Department  
**Subject:** Reconnaissance

A.X. has let me into the Tappy laboratory twice over the past few days. Both times we were discovered by a T-Mobile employee and I was asked to leave, since I wasn't allowed to be there. I observed the robot on both visits and took pictures on the second.

I went once more today to TMO's mechanical arm testing laboratory and gained an overall understanding of the test environment. I summarised it, please take a look at the attached document and pictures. TMO has made it clear that I am not allowed to re-enter the robot laboratory. Going forward, A.X. will help you get a deeper understanding of the remaining information.

**Date:** May 2013  
**From:** T-Mobile partner relations  
**To:** usa@huawei  
**Subject:** Return all badges immediately

Due to recent and repeated violations of T-Mobile's on-site rules, Huawei USA's access to the Tappy laboratory has been revoked. All Huawei USA employees must return their badges to T-Mobile, with the exception of A.X., who will be the only Huawei USA employee with access to the testing facilities.

This is only so Huawei can complete limited testing on in-progress projects.

**Date:** May 2013  
**From:** F.W. (Huawei China engineer)  
**To:** engineers@huawei, jy@huawei, ax@huawei  
**Subject:** Re: Robot arm

A.X. was able to remove the robot arm from the laboratory without being detected and I took exact measurements. However, TMO quickly discovered the arm was missing and A.X. was forced to return the part the following day.

A.X. told them it was taken by mistake. Our access to the lab has been completely revoked and Huawei USA employees are no longer allowed inside the facility unsupervised.

I've attached detailed measurements of the arm. See pictures for details.

