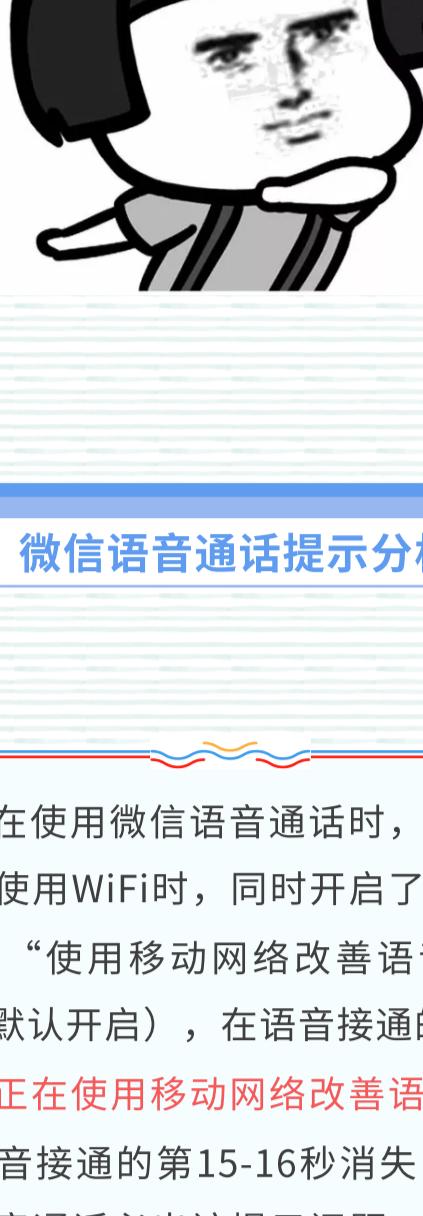


A cartoon illustration of a character with a large head and a small body, sitting at a desk and working on a computer. The character is wearing a pink shirt and black pants.

A black and white cartoon illustration of a person's head and shoulders. The person has dark hair styled in a flat-top and is wearing a dark t-shirt. They have a wide-eyed, shocked expression and are pointing their right index finger upwards towards the top left corner of the frame.

对比测试真

故障源自兼容



不是因为wifi信号差
终端旁边，信号强
然会有提示“正在
示会在语音接通的



A close-up photograph of a smartphone displaying a video call interface. The screen shows the time as 6:57, a battery level at 100%, signal strength, and a video recording icon with the duration 00:11. The phone has a red case.

综上，怀疑跟手机终端差异性有关，怀疑是微信该功能对各厂商终端兼容性不好，导致一开始无法获取到终端准确的WiFi网络信息，导致的误报。

4、微信语音报文抓包验证】

为了探求是否是因为终端主动探测微信服务器，探测响应延迟高导致的提示“正在使用移动网络改善语音质量”，我们对有问题的终端进行了微信语音报文抓包验证：

(1) 微信语音通话使用的是100字节左右的UDP报文，报文发送没有看到有重传或者RST之类的报文，报文发送和接收正常。

4253 69.411396	10.201.0.4	111.20.16.153	UDP	103 33638 → ircdm(8000) Len=61
4254 69.411515	10.201.0.4	111.20.16.153	UDP	105 33638 → ircdm(8000) Len=63
4255 69.411635	10.201.0.4	111.20.16.153	UDP	132 33638 → ircdm(8000) Len=98
4256 69.411618	10.201.0.4	111.20.16.153	UDP	100 33638 → ircdm(8000) Len=58
4257 69.419980	10.201.0.4	111.20.16.153	UDP	103 33638 → ircdm(8000) Len=61
4258 69.419980	10.201.0.4	111.20.16.153	UDP	103 33638 → ircdm(8000) Len=61
4259 69.420875	10.201.0.4	111.20.16.153	UDP	103 33638 → ircdm(8000) Len=61
4260 69.463862	111.20.16.153	10.201.0.4	UDP	196 ircdm(8000) → 33638 Len=68
4261 69.468359	111.20.16.153	10.201.0.4	UDP	102 ircdm(8000) → 33638 Len=68
4262 69.468360	111.20.16.153	10.201.0.4	UDP	102 ircdm(8000) → 33638 Len=68
4263 69.469350	111.20.16.153	10.201.0.4	UDP	102 ircdm(8000) → 33638 Len=68
4264 69.476994	111.20.16.153	10.201.0.4	UDP	102 ircdm(8000) → 33638 Len=68
4265 69.477246	111.20.16.153	10.201.0.4	UDP	102 ircdm(8000) → 33638 Len=68
4266 69.477247	111.20.16.153	10.201.0.4	UDP	108 ircdm(8000) → 33638 Len=66
4267 69.477247	111.20.16.153	10.201.0.4	UDP	102 ircdm(8000) → 33638 Len=68
4272 69.718929	111.20.16.153	10.201.0.4	UDP	98 ircdm(8000) → 33638 Len=56
4273 69.718929	111.20.16.153	10.201.0.4	UDP	97 ircdm(8000) → 33638 Len=55
4274 69.718929	111.20.16.153	10.201.0.4	UDP	98 ircdm(8000) → 33638 Len=56
4275 69.718930	111.20.16.153	10.201.0.4	UDP	98 ircdm(8000) → 33638 Len=56
4276 69.718930	111.20.16.153	10.201.0.4	UDP	102 ircdm(8000) → 33638 Len=60
4277 69.718930	111.20.16.153	10.201.0.4	UDP	102 ircdm(8000) → 33638 Len=60
4278 69.718930	111.20.16.153	10.201.0.4	UDP	102 ircdm(8000) → 33638 Len=60
4279 69.719165	111.20.16.153	10.201.0.4	UDP	102 ircdm(8000) → 33638 Len=60
4280 69.731988	111.20.16.153	10.201.0.4	UDP	97 ircdm(8000) → 33638 Len=55

(2) 在进行语音通话过程中，发现微信客户端会向语音通话服务器（如下111.20.16.153）发送icmp的ping报文。猜测主要目的是检查客户端和服务器的连通性以及检查客户端和服务器之间的网络时延。如下ping

话，所以微信不可能将该数据作为提示上述“正在使用移动网络改善语音质量”的标准。

序号	源地址	目的地址	协议	内容摘要
1	11.20.16.153	10.201.0.4	ICMP	97 irdmi(8000) → 33638 Len=55
2	10.201.0.4	11.20.16.153	ICMP	98 Echo (ping) request id=0x00001, seq=22/5632, tt
3	11.20.16.153	10.201.0.4	UDP	98 33638 → irdmi(8000) Len=56
4	10.201.0.4	11.20.16.153	UDP	142 33638 → irdmi(8000) Len=100
5	11.20.16.153	10.201.0.4	UDP	97 irdmi(8000) → 33638 Len=55
6	10.201.0.4	11.20.16.153	ICMP	98 Echo (ping) reply id=0x00001, seq=22/5632, tt
7	11.20.16.153	10.201.0.4	UDP	97 33638 → irdmi(8000) Len=55
8	10.201.0.4	11.20.16.153	UDP	129 irdmi(8000) → 33638 Len=87
9	11.20.16.153	10.201.0.4	UDP	114 irdmi(8000) → 33638 Len=72
10	10.201.0.4	11.20.16.153	UDP	98 33638 → irdmi(8000) Len=56
11	11.20.16.153	10.201.0.4	UDP	98 33638 → irdmi(8000) Len=56

```
[header checksum status: Unverified]
Source: 11.20.16.153 (11.20.16.153)
Destination: 10.201.0.4 (10.201.0.4)
Internet Control Message Protocol
Type: 0 (Echo (ping) reply)
Code: 0
Checksum: 0xada4 [correct]
[Checksum Status: Good]
Identifier (BE): 1 (0x0001)
Identifier (LE): 256 (0x0100)
Sequence number (BE): 22 (0x0016)
Sequence number (LE): 5632 (0x1600)
[request frame: 0x0001]
[Response time: 15.488 ms]
Data (56 bytes)
```

ping包的时延

Data (56 bytes)

微信“使用移动网络改善语音质量”的功能，在语音接通的第5-6秒通话界面上会提示“正在使用移动网络改善语音质量”的问题跟wifi信号强度、设备厂商没有关系，跟手机终端有关，大多数厂商的终端会表现出该问题，少数厂商（华为）终端无问题。

通过抓包确认微信该功能应该不是通过检查客户端和服务器之间的网络时延来判断的，从抓包看到的探测延时极低（20ms以内）。通过手机终端差异性对比，猜测很大可能是通过微信直

接收到了机头端后台WIFI下的WIFI网络信息
(如信号强度, 实时连接速率, 协商速率, 丢包/重传等参数) 综合来进行判断的。可能因微信该功能对各厂商终端兼容性不好, 导致一开始无法获取到终端准确的wifi网络信息, 从而导致的误报。

「龙粉走起来」

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The image is a blue-tinted collage. At the top, there is a URL in English: "http://h3c.com/cn/Service/Document_Software/TechnicalInfo/ProductMaintenanceInfo/WLAN/DailyMainten/DailyMaintenanceGuide/". Below this, in large blue text, is the message: "往期公众号PDF合集：知了社区—运维工具—资料中心—无线—《冬冬说无线》系列资料". The background of the collage shows a stylized landscape with mountains and water.



A QR code is located on the left side of the page, with the text "HBC Service" written vertically above it in a red box.

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