Articles from FreeSandal

W!o+ 的《小伶鼬工坊演義》：通往樹莓派 3 之 Hearsay □○

2016-03-14 06:03:41 懸鉤子

Hearsay

Hearsay evidence is “an out-of-court statement introduced to prove the truth of the matter asserted therein.” In certain courts hearsay evidence is inadmissible (the “Hearsay Evidence Rule”) unless an exception to the Hearsay Rule applies.

For example, to prove Tom was in town, the attorney asks a witness, “What did Susan tell you about Tom being in town?” Since the witness’ answer will rely on an out-of-court statement that Susan made, Susan is not available for cross-examination, and it is to prove the truth that Tom was in town, it is hearsay. A justification for the objection is that the person who made the statement is not in court and thus is insulated from cross examination. Note, however, that if the attorney asking the same question is trying to prove not the truth of the assertion about Tom being in town but the fact that Susan said the specific words, it may be acceptable. For example, it would be acceptable to ask a witness what Susan told them about Tom in a defamation case against Susan because now the witness is asked about the opposing party’s statement that constitutes a verbal act.[1][2]

The hearsay rule does not exclude the evidence if it is an operative fact[*clarification needed*]. Language of commercial offer and acceptance is also admissible over a hearsay exception because the statements have independent legal significance.

Double hearsay is a hearsay statement that contains another hearsay statement itself.

For example, a witness wants to testify that “a very reliable man informed me that Wools-Sampson told him.” The statements of the *very reliable man* and *Wools-Sampson* are both hearsay submissions on the part of the witness, and the second hearsay (the statement of *Wools-Sampson*) depends on the first (the statement of the *very reliable man*). In a court, both layers of hearsay must be found separately admissible. In this example, the first hearsay also comes from an anonymous source, and the admissibility of an anonymous statement requires additional legal burden of proof.

Many jurisdictions that generally disallow hearsay evidence in courts permit the more widespread use of hearsay in non-judicial hearings.

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傳聞證據排除法則

傳聞證據排除法則，是刑事訴訟法上，判斷是否應排除傳聞證據的理論，即不採「傳聞證據」之法則。應與之區別者，為「傳聞法則 」。傳聞法則是指「規範傳聞證據資料使用與否之法則」，其中以排除為原則，使用為例外，因為「法則」當中，一定包含「原則」與「例外」。因此，傳聞證據排除法則，其實是「傳聞法則」的一部分，也就是傳聞法則的「原則」而已。所謂傳聞證據，原指「傳聞供述證據」，即內容為證人之陳述，供述者僅轉述證人之陳述，現泛指「證人之書面傳聞」與「證人之證人傳聞」。

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自從之前編輯《時間線：樹莓派發展簡史》以來，已過了五、六百個日子的了？也許早該重新修繕的吧！然在如何重編一事，卻一直沒有好想法 ，這其間每次樹莓派基金會『新發行』之時常有各種『傳聞』 Hearsay 。回想自己幾年來因好奇貪玩，故常接觸『☆★之火』說法，何不說說幾則『經驗』，雖算不得『 □ ○ 傳聞』 之思辨，或可傳達『科學』誠該建立在『實證』基礎上的乎？！

【樹莓派 3 到底是 哪裡生產的？？】

依據『 elinux.org 』之整理列表：

Revision	Release Date	Model	PCB Revision	Memory	Notes
Beta	Q1 2012	B (Beta)	?	256 MB	Beta Board
0002	Q1 2012	B	1.0	256 MB	
0003	Q3 2012	B (ECN0001)	1.0	256 MB	Fuses mod and D14 removed
0004	Q3 2012	B	2.0	256 MB	(Mfg by Sony)
0005	Q4 2012	B	2.0	256 MB	(Mfg by Qisda)
0006	Q4 2012	B	2.0	256 MB	(Mfg by Egoman)
0007	Q1 2013	A	2.0	256 MB	(Mfg by Egoman)
0008	Q1 2013	A	2.0	256 MB	(Mfg by Sony)
0009	Q1 2013	A	2.0	256 MB	(Mfg by Qisda)
000d	Q4 2012	B	2.0	512 MB	(Mfg by Egoman)
000e	Q4 2012	B	2.0	512 MB	(Mfg by Sony)
000f	Q4 2012	B	2.0	512 MB	(Mfg by Qisda)

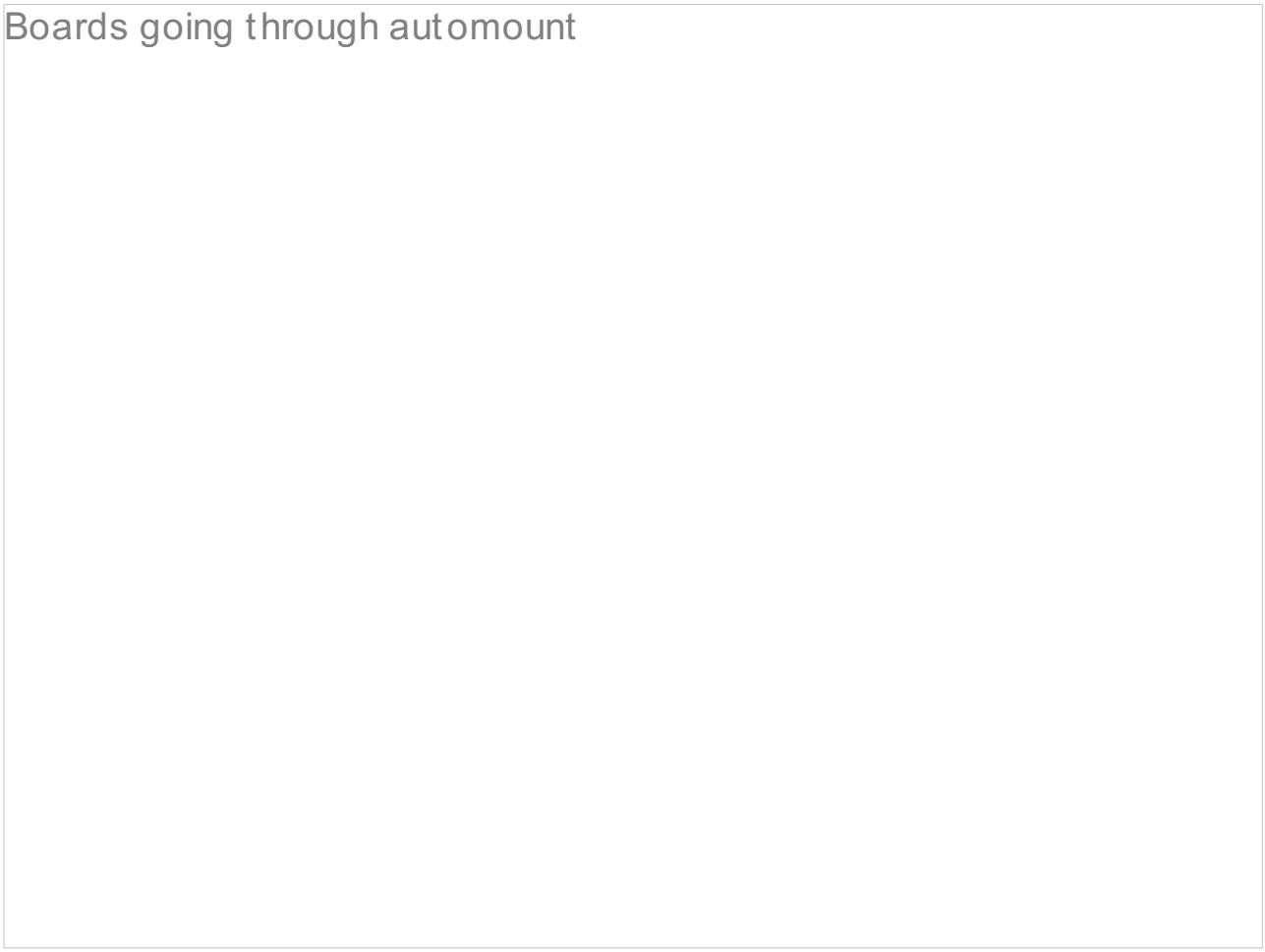
0010	Q3 2014	B+	1.0	512 MB	(Mfg by Sony)
0011	Q2 2014	Compute Module	1.0	512 MB	(Mfg by Sony)
0012	Q4 2014	A+	1.0	256 MB	(Mfg by Sony)
0013	Q1 2015	B+	1.2	512 MB	?
a01041	Q1 2015	2 Model B	1.1	1 GB	(Mfg by Sony)
a21041	Q1 2015	2 Model B	1.1	1 GB	(Mfg by Embest, China)
900092	Q4 2015	Zero	1.2	512 MB	(Mfg by Sony)
a02082	Q1 2016	3 Model B	1.2	1024 MB	**(Mfg by Sony)**

應該是『 Mfg by Sony 』，再考之以『歷史』之『名詞解釋』：

Fresh Model B stock in production

- 20 Comments

When we announced the launch of the Model B+ back in July, we emphasized that we'd be keeping the Model B in production. Since then, we've been (pleasantly) surprised by the ongoing demand for Model B from industrial customers, and a couple of weeks ago some tens of thousands of new units started to roll off the line at the Sony plant in Wales.



Boards going through automount

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當然是『 U.K. 』英國的咯！！但是這真的很重要嗎？？就像很多人都知道『蘋果手機』是『鴻海大陸廠』製造的，這難到是『傳聞』嗎？？！！還是說如此它就會有『品質疑慮』的呢！！？？……

事實上，『良心事業』從來沒有個『古今東西』之別的吧！

『樹莓派 3 』上實際驗證『版本碼』如下：

```
cat /proc/cpuinfo |
grep 'Revision' |
```

```
1 cat /proc/cpuinfo | grep 'Revision' | awk '{print $3}' | sed 's/^1000//'
```

```
pi@raspberrypi ~
$ cat
```

```
pi@raspberrypi ~ $ cat /proc/version
Linux version 4.1.19-v7+ (dc4@dc4-XPS13-9333) (gcc version 4.9.3
(crosstool-NG crosstool-ng-1.22.0-88-g8460611) ) #852 SMP Mon Mar 7
14:39:14 GMT 2016
pi@raspberrypi ~ $ cat /proc/cpuinfo | grep 'Revision' | awk '{print $3}' | sed
's/^1000//'
a02082
pi@raspberrypi ~ $
```

因此有關『資訊』之事，首要考察『來源』。對樹莓派來講，首先自然就是『官方說法』的嘍：

Raspberry Pi 3 is out now! Specs, benchmarks & more

Get the low down on the brand new Raspberry Pi 3 and see how its new features compare to previous Raspberry Pis

The Raspberry Pi 3 is here! Hopefully some of you were still surprised by the announcement today. Over the past four years, the Raspberry Pi has sold eight million units – three million in the last year alone – and now on its fourth birthday a brand new upgraded Pi has been released. You can read absolutely everything you'd want to know about it in issue 43 of the magazine coming out on Thursday but for now we thought we'd give you the hard facts about this brand new Raspberry Pi.

And yes, it has wireless internet.

Specifications

SoC: Broadcom BCM2837
CPU: 4× ARM Cortex-A53, 1.2GHz
GPU: Broadcom VideoCore IV
RAM: 1GB LPDDR2 (900 MHz)
Networking: 10/100 Ethernet, 2.4GHz 802.11n wireless
Bluetooth: Bluetooth 4.1 Classic, Bluetooth Low Energy
Storage: microSD
GPIO: 40-pin header, populated
Ports: HDMI, 3.5mm analogue audio-video jack, 4× USB 2.0, Ethernet, Camera Serial Interface (CSI), Display Serial Interface (DSI)

……

Issue 43

Mar 2016

Raspberry Pi 3 is here! Learn all about the new features and functionality and see how it compares to previous models…

□

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同樣重要的就是人人可以『獨立驗證』：

『黑傑克』果然風格不變，這則簡訊只有幾個字【 BMK ㄊㄟㄙㄉㄨˋ】，想來大概是指『 Benchmarking Test』，說來已經多年很少聽到這個詞的了。據聞『標桿分析法』 Benchmarking 起源於『全錄』 Xerox 公司，這家公司曾經是『影印機』的代名詞，市場佔有率高達八成，但在日本公司強力的競爭下，只剩下了 13%。於是『全錄』 在一九七九年率先執行『標桿分析法』企圖力挽狂瀾，總裁柯恩斯於一九八二年赴日學習競爭對手，…重拾競爭優勢。也許這就是 PC 市場早年流行用『 BMK 』來行銷所謂之第一流的產品之原因的吧！

既然黑傑克這麼說的了，作者想想或許沒有先好好『驗證』 B+ 的『效能』，這顯然對『音樂播放器』發展用的『原型機』不能夠『知己』的吧！故此改過，介紹讀者『樹莓派』之『標桿分析法』軟體集成：

Roy Longbottom's Raspberry Pi Benchmarks

comprises numerous **FREE benchmarks and reliability testing programs**, for **processors**, **caches, memory**, **buses**, **disks**, **flash drives**, **graphics**, **local area networks** and **Internet**. Original ones run via DOS and later versions under all varieties of Windows. Most have also been converted to run under Linux on PCs. and many to run via Android on tablets and phones. Some of the Linux variety C/C++ source code was changed slightly to compile for execution on the **Raspberry Pi**.

摘自《音樂播放器之 CD 轉成 mp3 之《補充》 Benchmarks ！！》

實測結果如下：

【軟體下載】

Shell

```
wget
http://www.roylon
```

1 wget http://www.roylongbottom.org.uk/Raspberry_Pi_Benchmarks.zip

1 wget http://www.roylongbottom.org.uk/Raspberry_Pi_Benchmarks.zip

【解壓縮及修改模式】

Shell

unzip Raspberry_Pi_Be

```
1 unzip Raspberry_Pi_Benchmarks.zip
2 cd Raspberry_Pi_Benchmarks/
3 chmod +x *A7
4 chmod +x linpackPiSP
```

【測試結果】

pi@raspberrypi ~/Raspberry_Pi_

```
    pi@raspberrypi ~/Raspberry_Pi_Benchmarks $ ls
    aaREADME.txt  DriveSpeed  linpackPiA7SP  LLloops.txt  Source Code
    busspeedPiA6  Example Logs  linpackPiSP
    memspeedPiA6  Temperature_MHz_Test
    busspeedPiA7  java  Linpack.txt  memspeedPiA7  whetstonePiA6
1   dhrystonePiA6  LanSpeed  Linux Intel  memSpeed.txt  whetstonePiA7
2   dhrystonePiA7  linpackPiA6  liverloopsPiA6  NEON  whets.txt
3   Dhry.txt  linpackPiA7  liverloopsPiA7  OpenGL
4   pi@raspberrypi ~/Raspberry_Pi_Benchmarks $ ./whetstonePiA7
5
6   ##########################################
7   Single Precision C Whetstone Benchmark vfpv4 32 Bit, Tue Mar  8 17:16:32
8   2016
9
10 Calibrate
11      0.01 Seconds      1   Passes (x 100)
12      0.07 Seconds      5   Passes (x 100)
13      0.35 Seconds     25   Passes (x 100)
14      1.77 Seconds    125   Passes (x 100)
15      8.82 Seconds    625   Passes (x 100)
16
17 Use 708  passes (x 100)
18
19 From File /proc/cpuinfo
20 processor : 0
21 model name : ARMv7 Processor rev 4 (v7l)
22 BogoMIPS : 76.80
23 Features : half thumb fastmult vfp edsp neon vfpv3 tls vfpv4 idiva idivt
24 vfpd32 lpae evtstrm crc32
25 CPU implementer : 0x41
26 CPU architecture: 7
27 CPU variant : 0x0
28 CPU part : 0xd03
29 CPU revision : 4
```

```
30
31 processor : 1
32 model name : ARMv7 Processor rev 4 (v7l)
33 BogoMIPS : 76.80
34 Features : half thumb fastmult vfp edsp neon vfpv3 tls vfpv4 idiva idivt
35 vfpd32 lpae evtstrm crc32
36 CPU implementer : 0x41
37 CPU architecture: 7
38 CPU variant : 0x0
39 CPU part : 0xd03
40 CPU revision : 4
41
42 processor : 2
43 model name : ARMv7 Processor rev 4 (v7l)
44 BogoMIPS : 76.80
45 Features : half thumb fastmult vfp edsp neon vfpv3 tls vfpv4 idiva idivt
46 vfpd32 lpae evtstrm crc32
47 CPU implementer : 0x41
48 CPU architecture: 7
49 CPU variant : 0x0
50 CPU part : 0xd03
51 CPU revision : 4
52
53 processor : 3
54 model name : ARMv7 Processor rev 4 (v7l)
55 BogoMIPS : 76.80
56 Features : half thumb fastmult vfp edsp neon vfpv3 tls vfpv4 idiva idivt
57 vfpd32 lpae evtstrm crc32
58 CPU implementer : 0x41
59 CPU architecture: 7
60 CPU vLinux version 4.1.19-v7+ (dc4@dc4-XPS13-9333) (gcc version 4.9.3
61 (crosstool-NG crosstool-ng-1.22.0-88-g8460611) ) #852 SMP Mon Mar 7
62 14:39:14 GMT 2016
63
64
65 From File /proc/version
66 Linux version 4.1.19-v7+ (dc4@dc4-XPS13-9333) (gcc version 4.9.3
67 (crosstool-NG crosstool-ng-1.22.0-88-g8460611) ) #852 SMP Mon Mar 7
68 14:39:14 GMT 2016
69
70
71          Single Precision C/C++ Whetstone Benchmark
72
73 Loop content                Result              MFLOPS      MOPS   Seconds
74
75 N1 floating point     -1.12475013732910156       333.681             0.041
76 N2 floating point     -1.12274742126464844       328.398             0.290
77 N3 if then else       1.00000000000000000              1790.157    0.041
78 N4 fixed point        12.00000000000000000              1471.181    0.152
79 N5 sin,cos etc.       0.499110102653503 42              12.059    4.885
80 N6 floating point      0.99999982118606567       254.345             1.501
81 N7 assignments         3.00000000000000000              1188.336    0.110
82 N8 exp,sqrt etc.       0.751108646392822 27              8.616    3.057
83
```

84 MWIPS 702.629 10.076
85

A new results file, whets.txt, will have been created in the same directory as the .EXE files, if one did not already exist.

Type additional information to include in whets.txt - Press Enter