

BRexx: Running Rexx on Android Systems

Eva Gerger

26th International Rexx Symposium 2015



Contents

- What is BRexx?
- Nutshell examples
- BRexx vs. Rexxoid

BRexx - What for?

- Android applications are quite complex
- Write & run scripts directly on Android device
- Using Rexx and Android functionality together



BRexx - How?

Scripting Layer 4 Android

- <https://code.google.com/p/android-scripting/>

BRexx

- <http://pceet075.cern.ch/bnv/brex/>



BRexx - Why?

- No documentation available
- No examples using Rexx
- Show some possible use-cases



Hello World - dlroW olleH

```
1 call import "android.r"  
2 call AndroidInit  
3 message = dialogGetInput("Hello World Message", " Your Message:",  
    "Hello World")  
4 say "Toastmessage=" reverse(message)  
5 call makeToast reverse(message)
```

Vampire

```
1 call import "android.r"  
2 call AndroidInit  
3 call startSensingTimed 4, 500  
4 call eventWaitFor "sensors"  
5 do 10  
6     strength = sensorsGetLight()  
7     say strength  
8     if strength > 100 then call vibrate 500  
9     call sleep 4  
10 end  
11 say "this is the end"
```

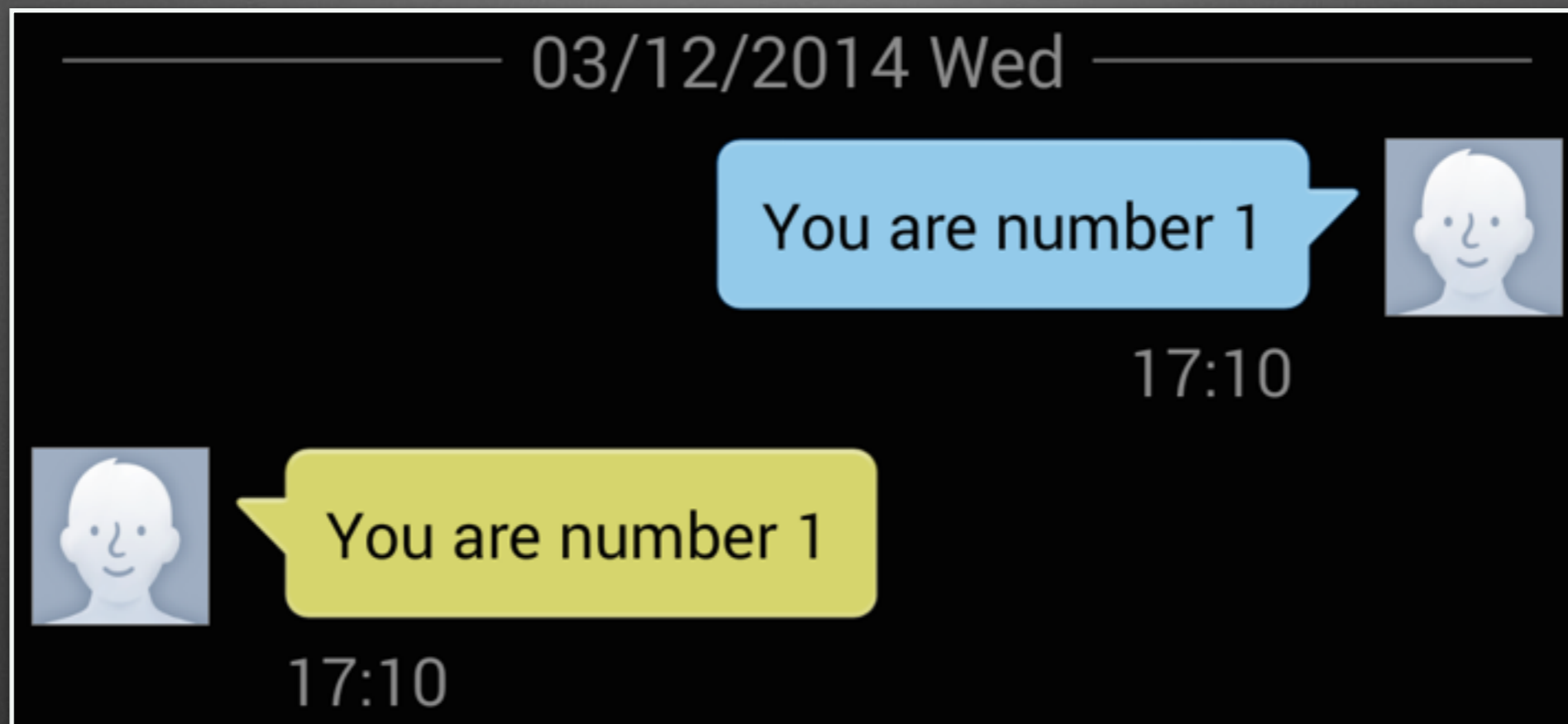
SMS to..

#1

```
1 call import "android.r"
2 call AndroidInit
4 x = dialogGetInput("Number of SMS to send", "Please enter number
of SMS to send:")
6 do i = 1 to x
7     nr = dialogGetInput("Phone number", "Please enter phone
number:")
8     call smsSend "tel:"nr, "You are number "i
9 end
```


SMS to..

#2



How is my battery doing?

```
1 call import "android.r"  
2 call AndroidInit  
3 call batteryStartMonitoring  
4 call eventWaitFor "battery", 5000  
5 a = batteryGetLevel()  
6 call batteryStopMonitoring  
7 call makeToast Batterylevel a
```

Hi, Bluetooth!

#Server

```
1 /* Server */
2 call import "android.r"
3 call AndroidInit
4 call toggleBluetoothState true
5 say "bluetooth is on!"
6 call bluetoothMakeDiscoverable 300
7 say "now discoverable"
8 call bluetoothAccept "457807c0-4897-11df-9879-0800200c9a66", 0
9 say "connected!"
10 message = dialogGetInput("Your Message", "Please enter message:")
11 call bluetoothWrite message
12 call sleep 10
```

Hi, Bluetooth!

#Client

```
1 /* Client */
2 call import "android.r"
3 call AndroidInit
4 call toggleBluetoothState true
5 a = bluetoothConnect("457807c0-4897-11df-9879-0800200c9a66")
6 say a
7 call sleep 10
8 a = bluetoothRead(4096)
9 say a
10 pull .
```

Look @ Maps

#1

```
15 mapGoTo:
16 parse arg location
17 call startActivity "android.intent.action.VIEW", "geo:0,0?
   q="location
18 return
19
20 mapZoom:
21 parse arg zoom
22 call startActivity "android.intent.action.VIEW", "geo:0,0?
   z="zoom)
23 return
```

Look @ Maps

#2

```
1 call import "android.r"  
2 call AndroidInit  
3 call mapZoom 1  
4 call mapGoTo "usa"  
5 call sleep 7  
6 call mapGoTo "wu wien"  
7 call sleep 7  
8 call mapZoom 20  
9 call sleep 7  
10 call mapGoTo "tu wien"  
11 call sleep 7  
12 call mapZoom 10  
13 exit
```

Phone-info

#1

```
1 call import "android.r"
2 call AndroidInit
3 say "DeviceId:" deviceId()
4 say "CellLocation:" getLocation()
5 say "DeviceSoftwareVersion:" getDeviceSoftwareVersion()
6 say "NeighboringCellInfo:" getNeighboringCellInfo()
7 say "NetworkOperator:" getNetworkOperator()
8 say "NetworkOperatorName:" getNetworkOperatorName()
9 say "PhoneType:" getPhoneType()
10 say "SimCountryIso:" getSimCountryIso()
11 say "SimOperator:" getSimOperator()
12 say "SimOperatorName:" getSimOperatorName()
13 say "SimSerialNumber:" getSimSerialNumber()
```

Phone-info

#2

```
DeviceId: 357377052267292
CellLocation: {"cid":177921,"lac":17
DeviceSoftwareVersion: 83
NeighboringCellInfo: []}

NetworkOperator: 23201
NetworkOperatorName: A1
PhoneType: gsm
SimCountryIso: at
SimOperator: 23201
SimOperatorName:
SimSerialNumber: 8943015613196307140
```


Barcode Scanner

```
1 call import "android.r"
2 call AndroidInit
3 code = scanBarcode()
4 isbn = jsonDecode(code, "SCAN_RESULT")
5 url = "http://books.google.com?q=" isbn
6 call startActivity "android.intent.action.VIEW", url
7 exit
8
9 jsonDecode:
10 parse arg json, key
11 key = key || '":'
12 parse var json . (key) value '":' .
13 return value
```

BRexx vs. Rexxoid

ASPECT	REXXOID	BREXX
Installation	+	-
Example repository	-	+
Functionality	-	+
Usability	-	+
Performance	-	+
Community	-	+
Documentation	-	+
Readability	-	+
Debugging	+	-
Software updates	~	~

BRexx: Email

```
1 call import "android.r"  
2 call AndroidInit  
3 call sendEmail "john.doe@gmail.com", "hello", "hello from  
  Android"
```

Rexxoid: Email

```
1 "am start -a android.intent.action.SEND
--user 0
-t 'text/plain'
-e to 'john.doe@gmail.com'
-e android.intent.extra.SUBJECT 'hello'
-e android.intent.extra.TEXT 'hello from Android'"
```

Try it out ;-)