REALTEK

A w   A   n   A

---

w   A   n n   A,   [A   w   A A n   A A   A w A n   A

n   A w A   A   A   . A A

Table of Contents

A
A
A

_____

1 Introduction

w   A   n n   A   [A w   A A n   A A   A w A n   A n   A
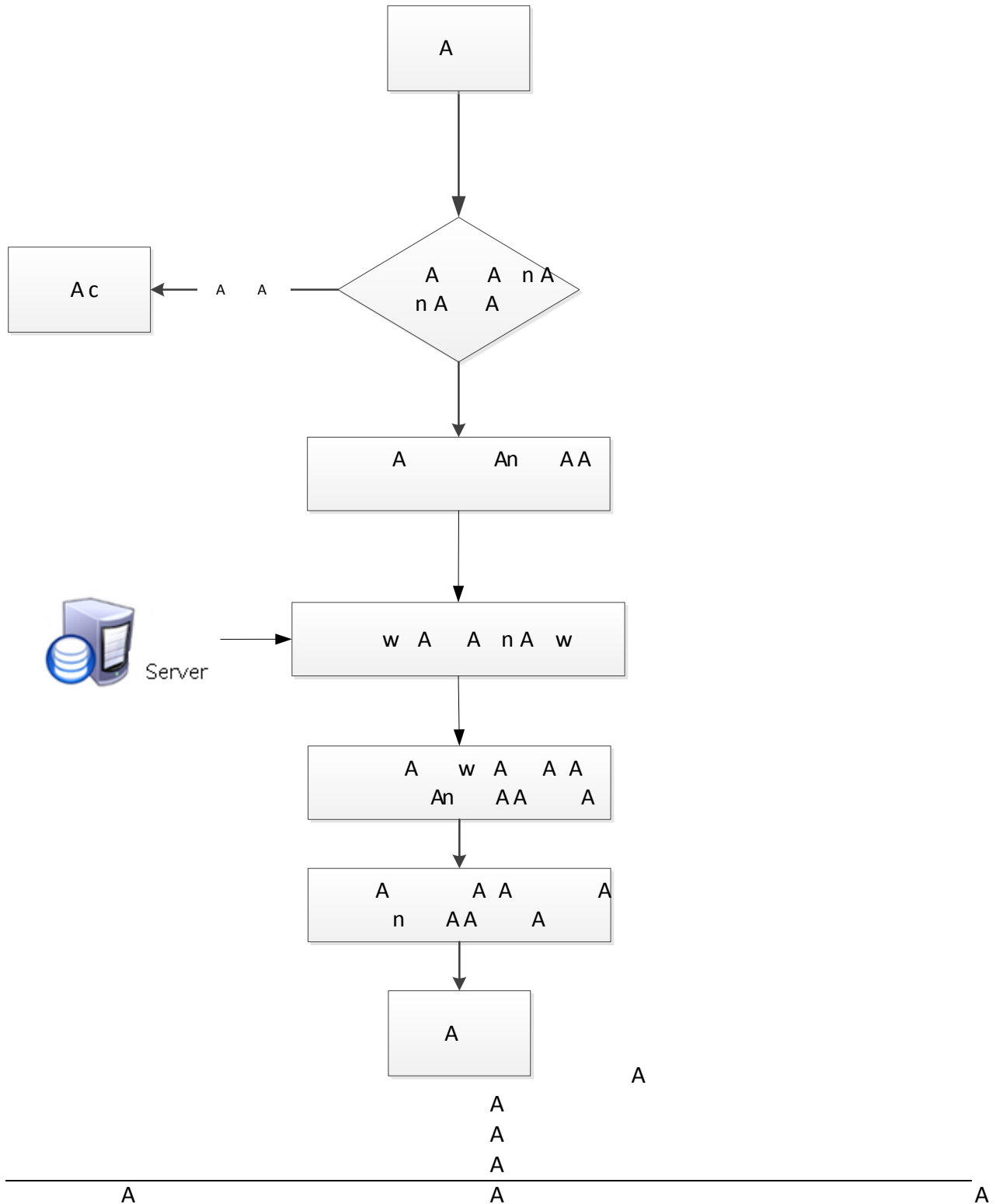w A   A   A   .A

_____

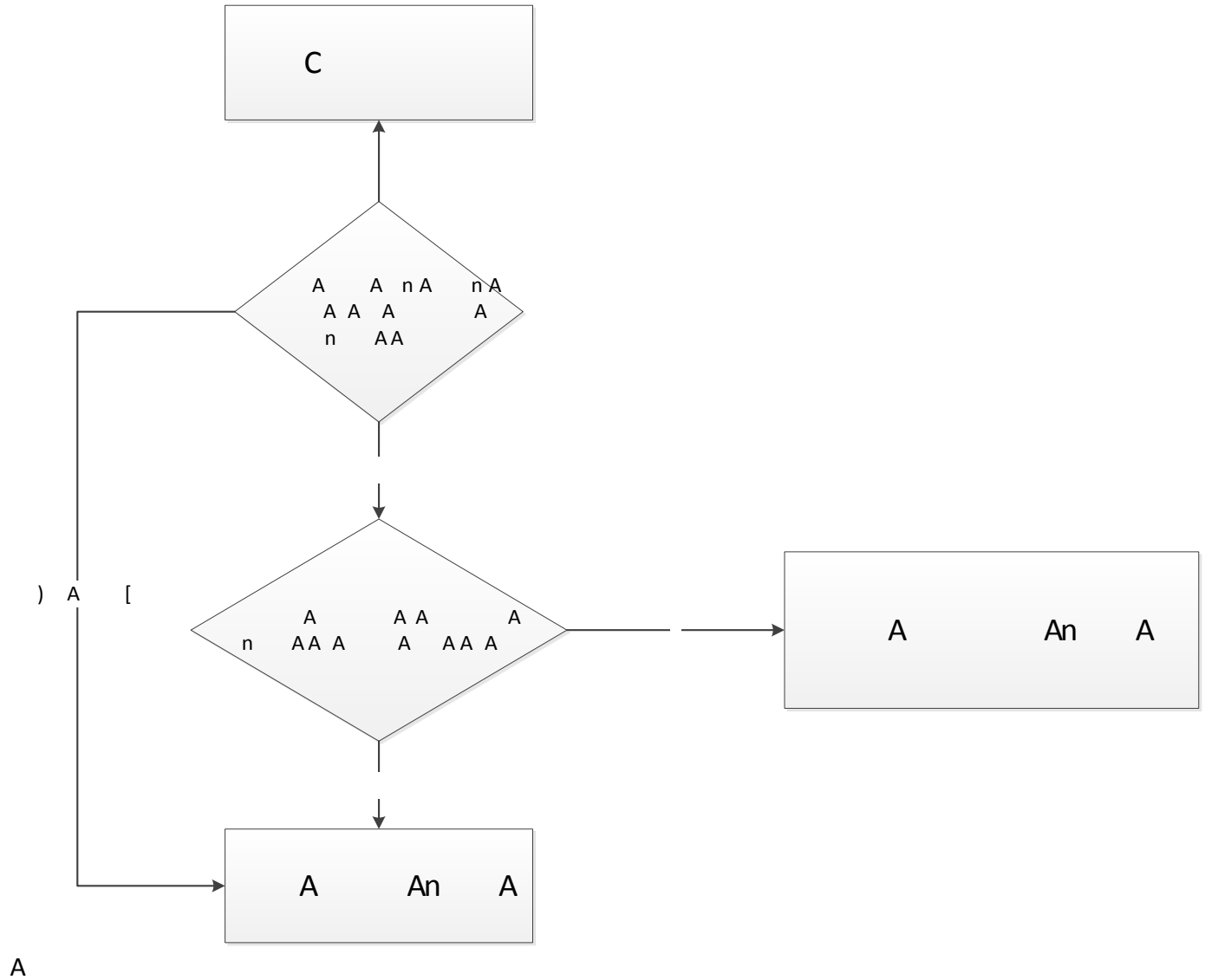# 2 OTA overview

2.1 OTA operation flow

.A   A   A   A A'   A   An   A   ;A   A   A A   A A y   ;A
A A w   A   .A

2.2 Boot process flow

C

A   A n A   n A
A A   A   A
n   A A

) A   [

A   A A   A
n   A A A   A   A A A

A   An   A

A   An   A

A

A
A
A

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2.3 Upgraded Partition

```
0x00000000  ┌──────────────┐
            │   Image 1     │
            │  Boot Mode    │
0x00008000  ├──────────────┤
            │   Reserved    │
0x00009000  ├──────────────┤
    offset  │ system data(4KB)│
            ├──────────────┤
            │ calibration data (4KB)│
0x0000B000  ├──────────────┤
            │   Default     │
            │   Image 2     │
            ├──────────────┤
            │     ...       │
            ├──────────────┤
            │  signature    │
            │  Upgraded     │
            │   Image 2     │
            ├──────────────┤
            │     ...       │
User Define ├──────────────┤
            │               │
            │  User Data    │
            │               │
            └──────────────┘
```

A

A A A   A c w ;A   A   An   A A A   .A   A   A A   A

n   A A A   A n A A   n A   A   A   A A A   A   A y   .A A

A

A

3 Implement OTA over Wi-Fi

3.1 OTA using local download server

A y n   A   A   A w A   An   A n AA   A   A   w .A   A   A

A   w A   An   A   A w Ac   A A   A   .AA

N   A   Ac   A w A   A A A   A A   A n A   A   .A

……   **Build OTA Application image**

Turn on OTA command

A   A   A A   n   n n   n   n   …A

A A n …A	
A G AWWWWA A	

A

Define server type = SERVER_LOCAL in update.c file (path: tools\DownloadServer\).

A A …A			
A W A A			
A W A A			
A W AA W A			

A

A

A

A

A

A

A

A
A
A
A
A   A   A

REALTEK

_____

Write the address of the upgraded image 2 to system data.

A A   A n   A   A A   A A   An   A A   A A   n A   A   A
.A

```
  n    A    .A
       A          ... A
       AWRITE_OAT_ADDR 1A
       A    :A
          . y         A
        A         A A y          :A
   c       A     A
   ))        A AN        [A  A)         A A N         n       [[[A  A
AAAAAAAAA)          A AN        [A  A
AAAAAAAAA)         A A y  [A A [   A
A        AAAAA)          A  A  y [[ A
A        A            )     ]   A    A   A    A y  y ;A  G           ;A         [:A
A        A            A           y  :A
A          A
A        AAAwrite_ota_addr_to_system_data)A        ;A          [:A
A
```

Read upgraded image 2 address from system data and verify this address

```
       A  A       ...A
     Av   A                  )w   A     n [A
  A
AAAA  A
AAAA     A          An     A A    A  n A      A
AAAA              )        ;A  GG          ;A      n        [:A
AAAA              )        ;AN        ;A  n      [:A
AAAA ))     n        A AN        [A   A)     n        A A N         n       [[[A  A
AAAAAAAA)     n        A AN        [A  A
AAAAAAAA)     n         A A y  [A A [   A
AAAAAAAA)     n        A  A  y [[A
AAAAAAAAAA      A             y  :A
```

A
A
A

A   A   A

Define custom signature

_____

...... **Local download server**

C   A   An   A   .c A A   w A   A   .A   w [.A

```
DownloadServer.exe        2014/6/13 ...        85 KB
New_Project.bin           2014/8/13 ...       330 KB
start.bat                 2014/8/13 ...         1 KB
```
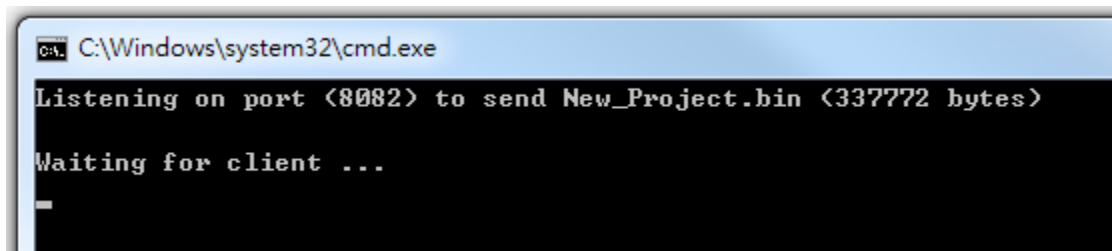A

A   .c A .A AA ;A AA   .c A

```
1  @echo off
2  DownloadServer 8082 New_Project.bin
3  set /p DUMMY=Press Enter to Continue ...
```
A

y   A   .c A

```
C:\Windows\system32\cmd.exe

Listening on port (8082) to send New_Project.bin (337772 bytes)

Waiting for client ...
```
A

c   A w A   A   A A .AA

A n n   .A   ]   .A

```
# ATWO=192.168.1.100[1111]
[ATWO]: _AT_WLAN_OTA_UPDATE_

[MEM] After do cmd, available heap 25152

#
[update_ota_local_task] Update task start

[update_ota_local_task] Update OTA success!
[update_ota_local_task] Update task exit
```
A

A   A w A   An   .A

A
A
A
_____
A   A   A