Safari 5.1 Cookie.binarycookie File Format [DRAFT]

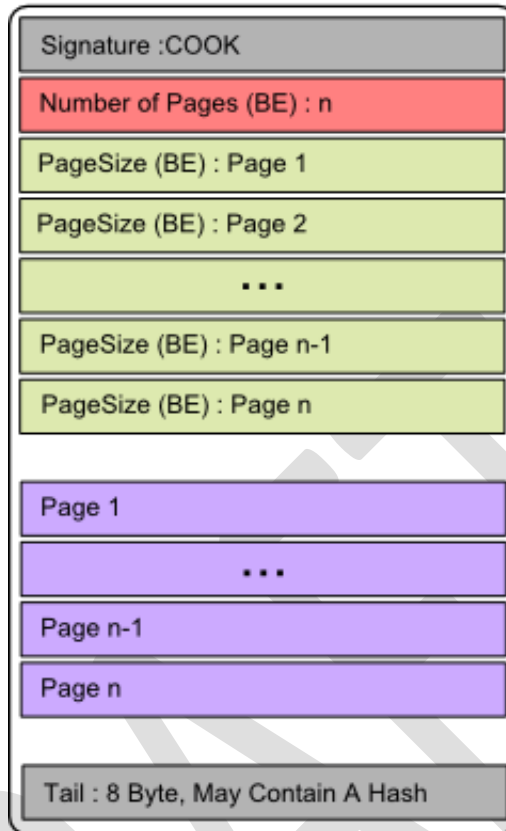## E. Miyake

ver. 0.2

Description: This document serves to fill in the gaps in the work posted by *AGG88* on stackoverflow : "*http://stackoverflow.com/questions/7545885/safari-5-1-cookie-format-specs*". There still in several gaps remaining, at least five fields in the cookie portion of the file remain unknown. There is also an 8 byte tail at the end of the Cookie file that remains unresolved, it's suggested that this may contain a checksum or hash of some sort to check the cookie file for corruption.
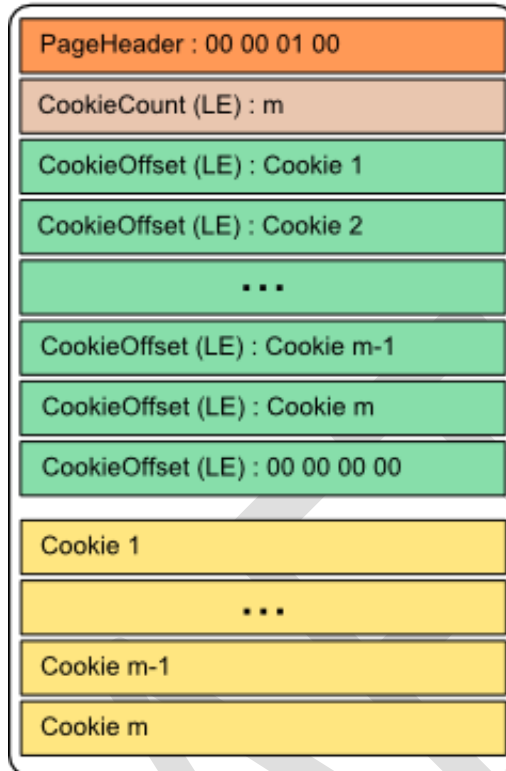
A Safari 5.1 "Cookie.binarycookie" file is composed of a header followed by one or more pages. Each page is composed of one or more cookies. At the end of the file is an 8 byte tail, it has been suggested that this tail contains a hash to check for corruption of the file.
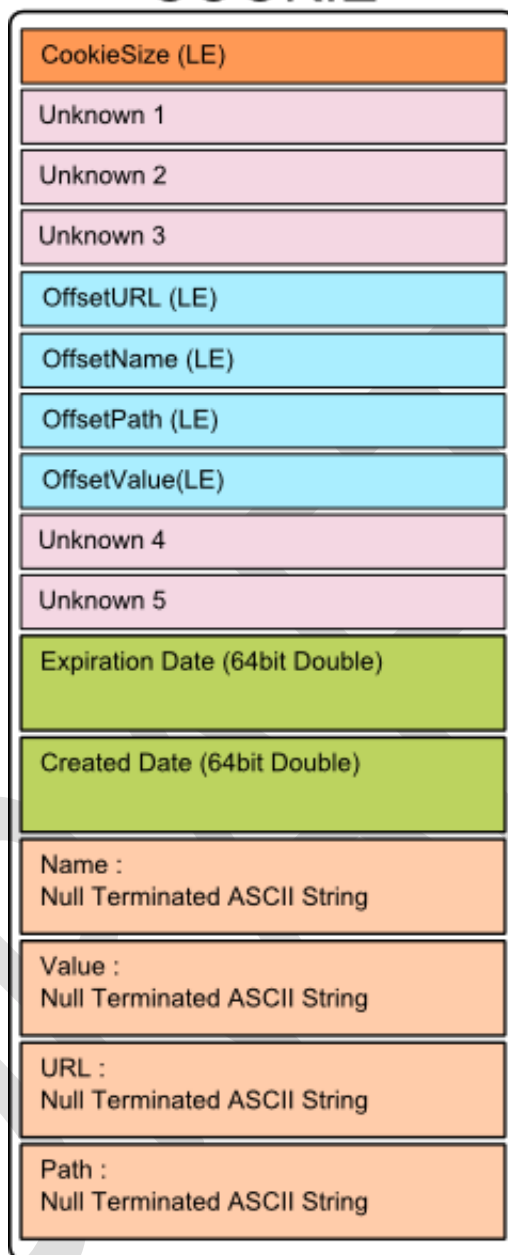
COOKIE FILE

Signature :COOK	
Number of Pages (BE) : n	
PageSize (BE) : Page 1	
PageSize (BE) : Page 2	
. . .	
PageSize (BE) : Page n-1	
PageSize (BE) : Page n	
Page 1	
. . .	
Page n-1	
Page n	
Tail : 8 Byte, May Contain A Hash	

Field Name	Size	Description
Signature	4 bytes	"COOK" file header signature.
Number of Pages	4 bytes	Little Endian Integer
Page Size	4 bytes	Little Endian Integer. Offset from start of page to start of cookie. There are CookieCount+1 entries.
Page	X bytes	Variable size cookie data. There are CookieCount cookie entries.
Tail	8 bytes	

PAGE

PageHeader : 00 00 01 00
CookieCount (LE) : m
CookieOffset (LE) : Cookie 1
CookieOffset (LE) : Cookie 2
...
CookieOffset (LE) : Cookie m-1
CookieOffset (LE) : Cookie m
CookieOffset (LE) : 00 00 00 00
Cookie 1
...
Cookie m-1
Cookie m

Field Name	Size	Description
Page Header	4 bytes	
CookieCount	4 bytes	Little Endian Integer
CookieOffset	4 bytes	Little Endian Integer. Offset from start of page to start of cookie. There are CookieCount+1 entries.
Cookie	X bytes	Variable size cookie data. There are CookieCount cookie entries.

COOKIE

CookieSize (LE)	
Unknown 1	
Unknown 2	
Unknown 3	
OffsetURL (LE)	
OffsetName (LE)	
OffsetPath (LE)	
OffsetValue(LE)	
Unknown 4	
Unknown 5	
Expiration Date (64bit Double)	
Created Date (64bit Double)	
Name : Null Terminated ASCII String	
Value : Null Terminated ASCII String	
URL : Null Terminated ASCII String	
Path : Null Terminated ASCII String	

Field Name	Size	Description
CookieSize	4 bytes	Size of the cookie in bytes. LE
Unknown 1	4 bytes	
Unknown 2	4 bytes	
Unknown 3	4 bytes	
OffsetURL	4 bytes	Offset from start of cookie to URL string. LE
OffsetName	4 bytes	Offset from start of cookie to Name string. LE
OffsetPath	4 bytes	Offset from start of cookie to Path string. LE
OffsetValue	4 bytes	Offset from start of cookie to Value string. LE
Unknown 4	4 bytes	

| Unknown 5	4 bytes	
Expiration Date	8 bytes	64bit Double Mac Absolute Time. GMT
Created Date	8 bytes	64 Bit Double Mac Absolute Time. GMT
Name	X bytes	Cookie name. A Null (0x00) terminated ASCII string.
Value	X bytes	Cookie value. A Null (0x00) terminated ASCII string.
URL	X bytes	Cookie URL. A Null (0x00) terminated ASCII string.
Path	X bytes	Cookie path. A Null (0x00) terminated ASCII string.
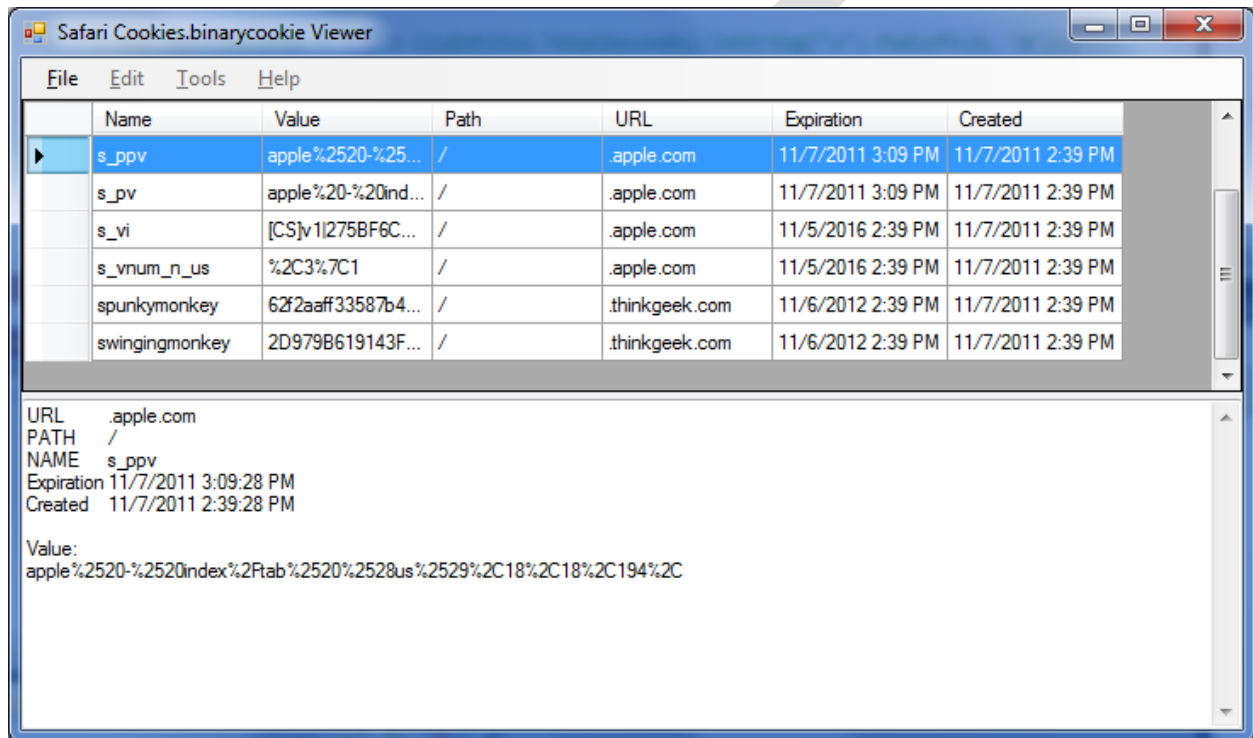
Figure 1 Safari Cookies.binarycookie Viewer Application