Camellia Cipher Suites for TLS

<draft-kato-tls-rfc4132bis-02.txt>

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TLS Working Group

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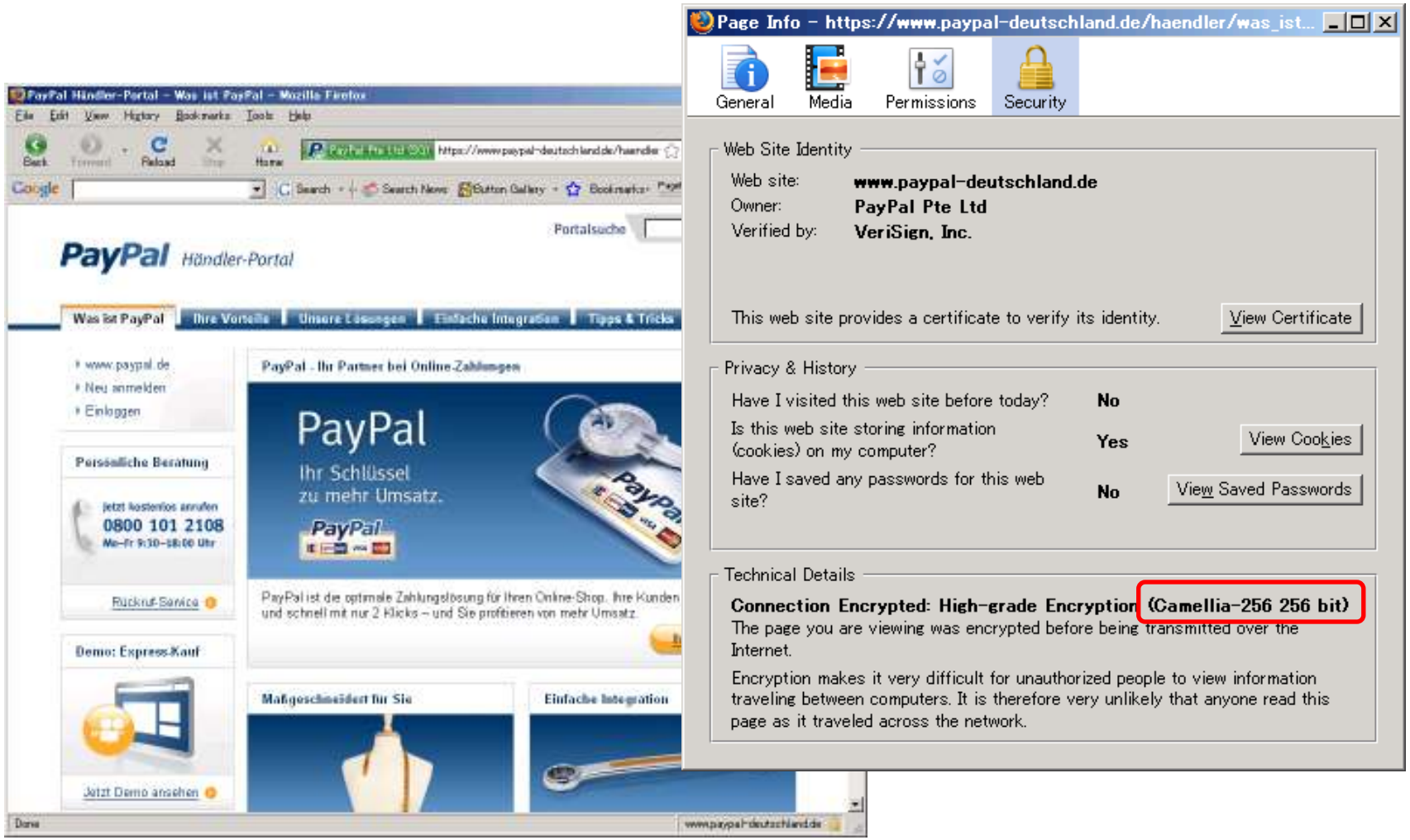
Back Ground

- RFC4132 Published July 2005
- Adapted several OSS
  - OpenSSL 0.9.8c or later
  - GnuTLS
  - Firefox 3.0
  - Linux
  - FreeBSD
  - Bouncy Castle

Connect to SSL Server by



Reference: Pay Pal(https://www.paypal-deutschland.de/haendler/was_ist_paypal.html)

Goal

- Our policy is to follow up AES's Cipher Suites.

The Camellia cipher

This cipher is recommended by the European Union NESSIE project, the Japanese CRYPTREC project, and was added to the SSL/TLS cipher list by RFC 4132. The Camellia algorithm will be in FireFox 3. It is not enabled by default in OpenSSL.

The Cameliia home site mentions that there are export (from Japan) restrictions which may make Japanese OpenSSL distributors cautious, but these are general restrictions on all strong (64+ bit) cryptography. There is nothing camellia-specific about these Japanese export restrictions, so adding Camellia does not change the Japanese export situation.

If you build OpenSSL for distribution to Japan or Europe, adding camellia is recommended:

Code:

```
PERL Configure VC-WIN32  enable-camellia
...
```

Reference: Apache Lounge (http://www.apachelounge.com/forum/viewtopic.php?t=1992)

Bundled OpenSSL with enable-camellia
openSUSE 10.3, Fedora core 9 …

- As an action of this policy, we propose these Camellia Cipher Suites.

Proposal New Cipher Suites

TLS_RSA_WITH_CAMELLIA_128_CBC_SHA256
TLS_RSA_WITH_CAMELLIA_256_CBC_SHA256
TLS_DH_DSS_WITH_CAMELLIA_128_CBC_SHA256
TLS_DH_RSA_WITH_CAMELLIA_128_CBC_SHA256
TLS_DHE_DSS_WITH_CAMELLIA_128_CBC_SHA256
TLS_DHE_RSA_WITH_CAMELLIA_128_CBC_SHA256
TLS_DH_anon_WITH_CAMELLIA_128_CBC_SHA256
TLS_DH_DSS_WITH_CAMELLIA_256_CBC_SHA256
TLS_DH_RSA_WITH_CAMELLIA_256_CBC_SHA256
TLS_DHE_DSS_WITH_CAMELLIA_256_CBC_SHA256
TLS_DHE_RSA_WITH_CAMELLIA_256_CBC_SHA256
TLS_DH_anon_WITH_CAMELLIA_256_CBC_SHA256

Proposal Camellia Cipher Suites

TLS_RSA_WITH_AES_128_CBC_SHA256
TLS_RSA_WITH_AES_256_CBC_SHA256
TLS_DH_DSS_WITH_AES_128_CBC_SHA256
TLS_DH_RSA_WITH_AES_128_CBC_SHA256
TLS_DHE_DSS_WITH_AES_128_CBC_SHA256
TLS_DHE_RSA_WITH_AES_128_CBC_SHA256
TLS_DH_anon_WITH_AES_128_CBC_SHA256
TLS_DH_DSS_WITH_AES_256_CBC_SHA256
TLS_DH_RSA_WITH_AES_256_CBC_SHA256
TLS_DHE_DSS_WITH_AES_256_CBC_SHA256
TLS_DHE_RSA_WITH_AES_256_CBC_SHA256
TLS_DH_anon_WITH_AES_256_CBC_SHA256

RFC4346-bis (AES)

The varieties are same!

What's Next?

- We would like to be adopted this draft as a ***WG item***.

Questions and comments?