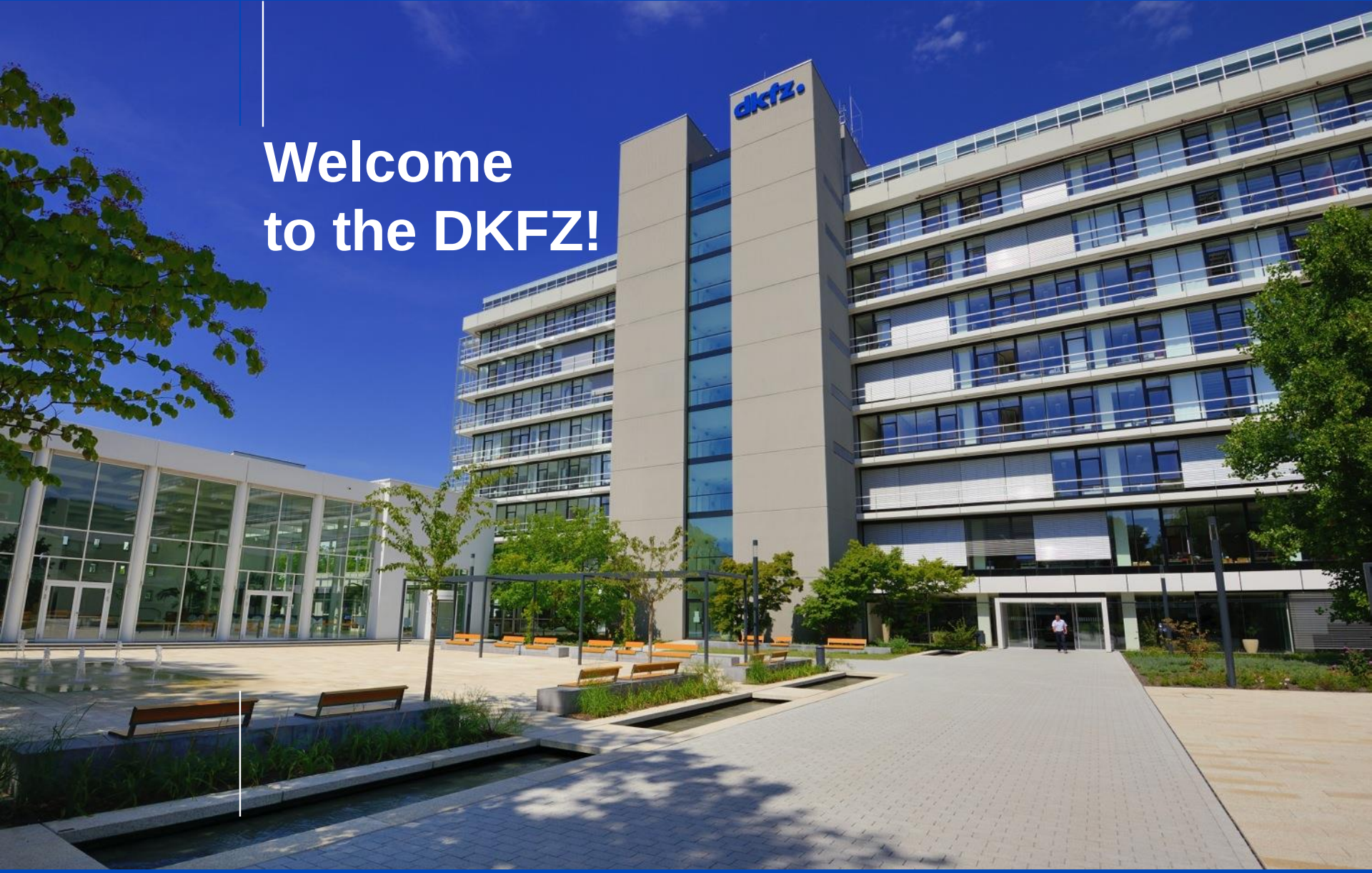
Explaining Bug 18908

Nils Gählert

Bug Squashing Seminar



Welcome to the DKFZ!

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Ehh… What is Bug 18908?

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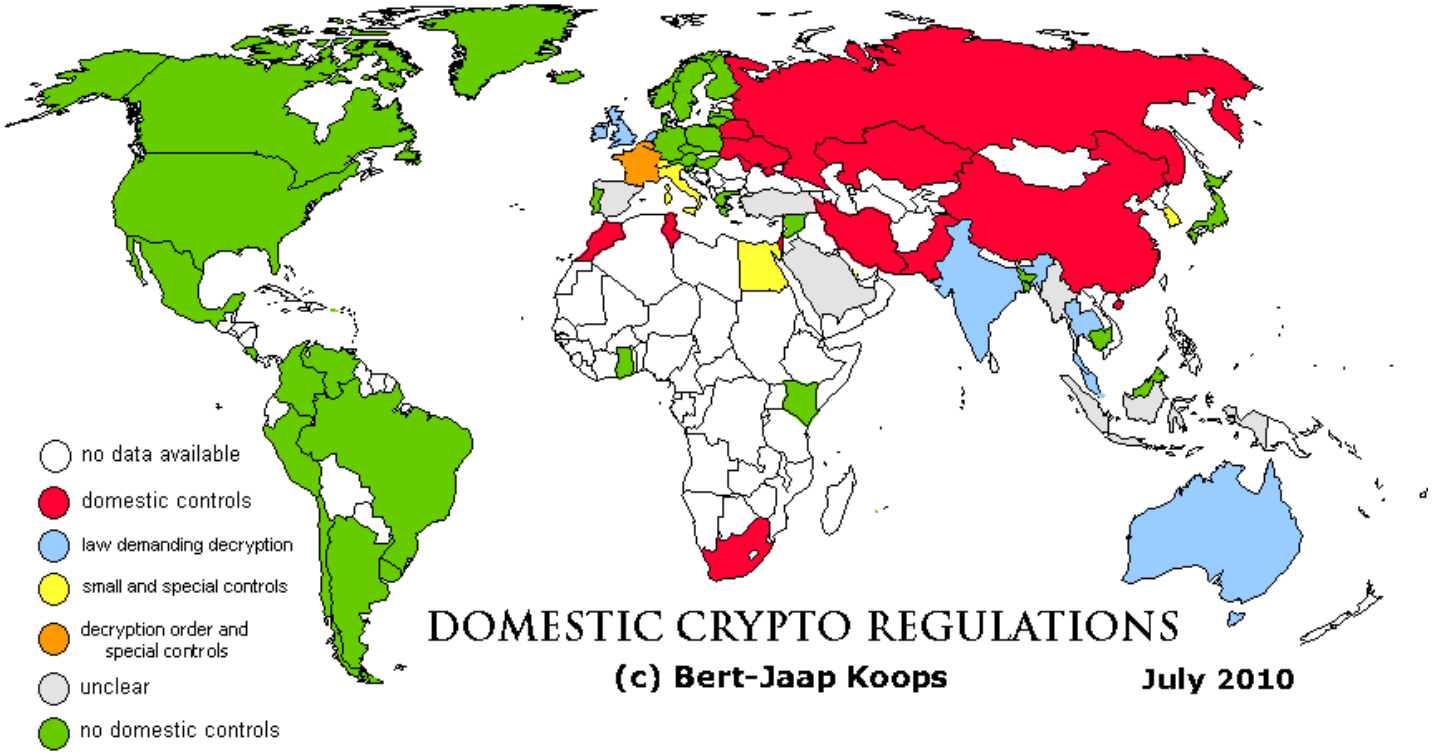
- Title:
  SSL Problems with XNAT Plugin connecting to HTTPS server address
- A. Fetzer:
  This is a know issue for Qt:
  http://stackoverflow.com/questions/20351155/how-can-i-enable-ssl-in-qt-windows-application
- S. Kislinskiy:
  This is a deliberate decision of the Qt team due to import/export restrictions regarding OpenSSL to some parts of the world

But we‘re not in North Korea!

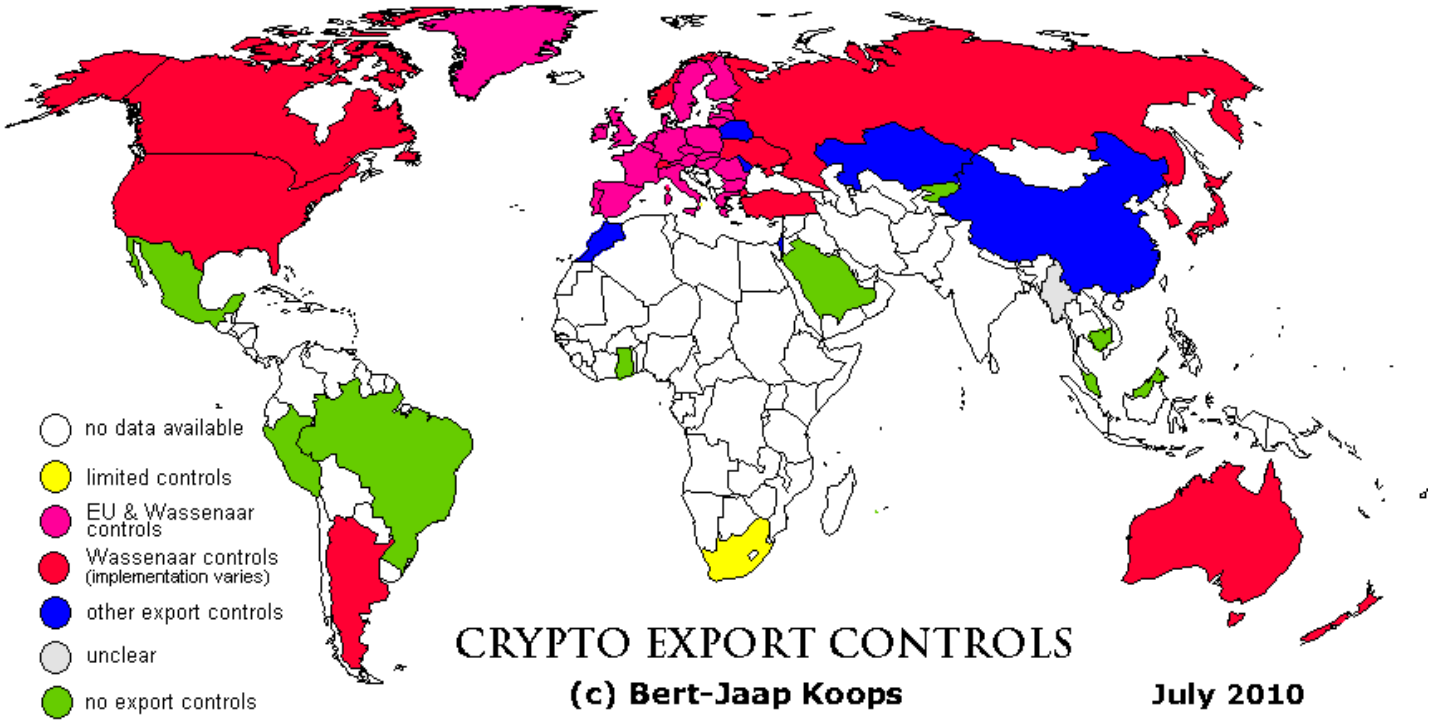
- Cryptography (nearly) completely forbidden in Cuba, Iran, North Korea, Sudan, Syria



[cryptolaw.org]

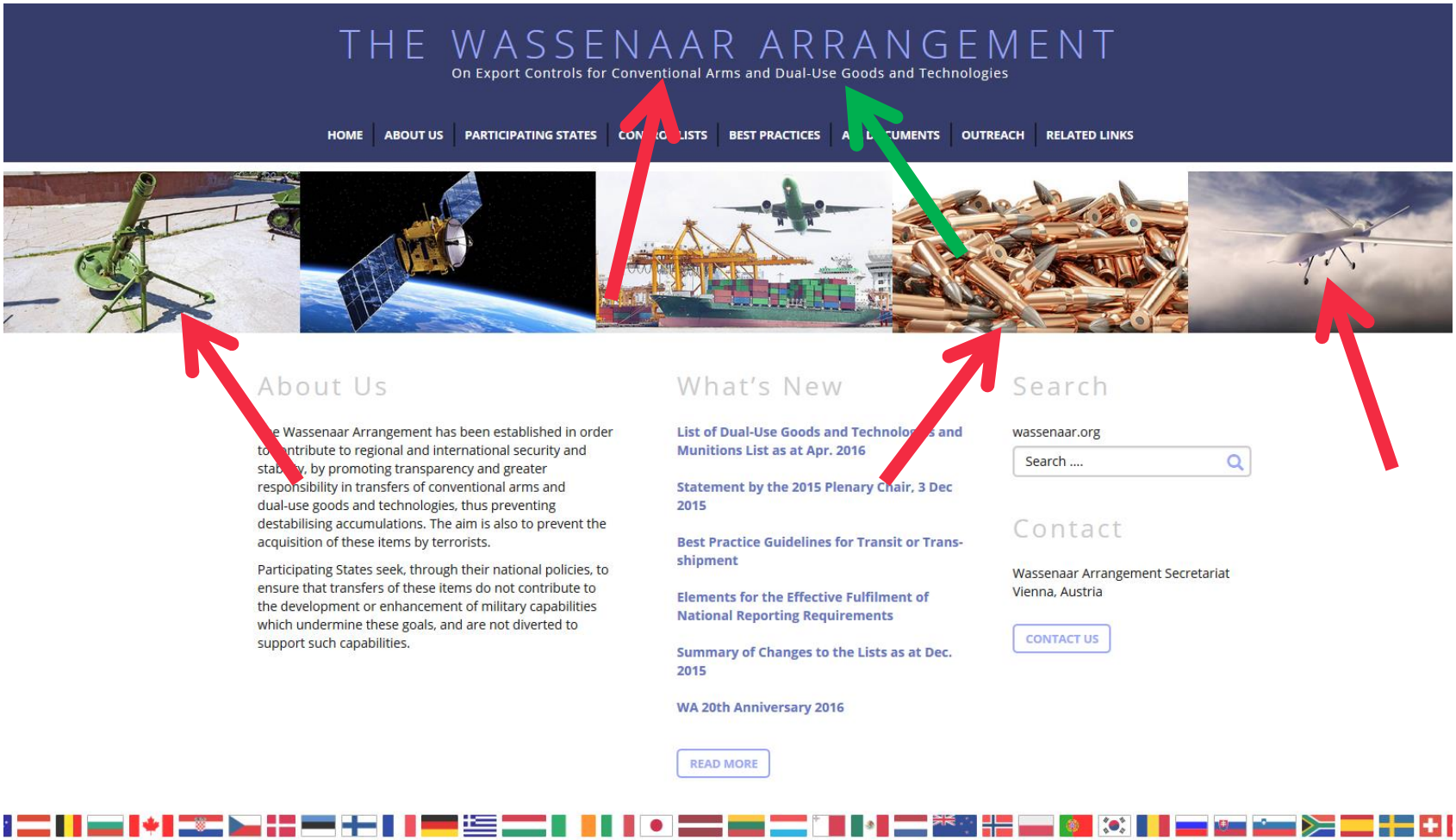
We‘re in Germany! So everything is fine.

- Really?



[cryptolaw.org]

Wassenaar-Arrangement (since 1996)



Cryptography as Dual-Use-Good

Wassenaar: 5. A. 2. a. 1.

- a. A "symmetric algorithm" employing a key length in excess of **56 bits;**
- b. An "asymmetric algorithm" where the security of the algorithm is based on any of the following:
  - 1. Factorisation of integers in excess of **512 bits (e.g., RSA);**
  - 2. Computation of discrete logarithms in a multiplicative group of a finite field of size greater than 512 bits (e.g., Diffie-Hellman over Z/pZ); or
  - 3. Discrete logarithms in a group other than mentioned in 5. A. 2. a. 1. b. 2. in excess of 112 bits (e.g., Diffie-Hellman over an elliptic curve);

[http://www.wassenaar.org/wp-content/uploads/2016/04/WA-LIST-15-1-CORR-1-2015-List-of-DU-Goods-and-Technologies-and-Munitions-List.pdf]

Are we screwed?

NO!

- The Lists [WA] do not control "software" which is any of the following:
  - 1. (…)
  - 2. "In the public domain"; or
  - 3. (…)

Public Domain?

- This means "technology" or "software" which has been made available without restrictions upon its further dissemination. *Note: Copyright restrictions do not remove "technology" or "software" from being "in the public domain".*

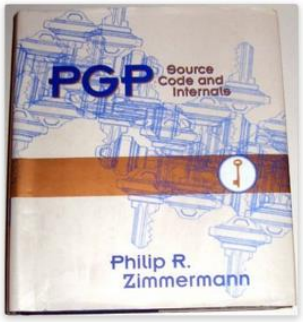
[http://www.wassenaar.org/wp-content/uploads/2016/04/WA-LIST-15-1-CORR-1-2015-List-of-DU-Goods-and-Technologies-and-Munitions-List.pdf]

Take-Home-Messages

- OpenSSL in Germany is fine.
- OpenSSL connections to other countries participating in the WA is fine.
- OpenSSL connections to other countries **not** participating in the WA is fine for you, for the other maybe not: ↯
- Implementing cryptographic algorithms that are **not** in public domain: ↯
- Developing algorithms with copyright and publish them in the public domain is fine.
- Bringing your MITK-Installation with XNAT to Syria, North Korea: ↯

Fun Fact

- Before WA: Strong restrictions e.g. in USA
- Source code of PGP was printed as a book in 1995 and sold worldwide and transcribed manually by 60 volunteers.
- Export of books is protected by the First Amendment.
- PGP available all over the world. ☺



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PGP: Source Code and Internals Hardcover – June 9, 1995

by Philip R. Zimmermann (Author)

★★★★★ 1 customer review

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PGP (Pretty Good Privacy) is a computer program for the encryption of data and electronic mail, a powerful "envelope" that allows individuals the same privacy in their communications as enjoyed by governments and large corporations. PGP, which is freely available on the Internet, uses public-key cryptography - specifically the RSA algorithm, which is particularly well-suited to the needs of computer-mediated communications. This book contains a formatted vesion of the complete source code for the latest release (2.6.2) of PGP.

Thank you for your attention!

Further information on www.dkfz.de

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