



Ministerie van Veiligheid en Justitie

Request for Information

Development of NAND Flash
Emulator for the Netherlands
Forensic Institute

Reference: 2113711

Colofon

Project name Request for information Development of NAND Flash Emulator for the Netherlands Forensic Institute

Reference 2113711

Version 2.0

Sender **Ministry of Security and Justice**
Dienstencentrum
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1. Introduction

The Netherlands Forensic Institute, which operates under the control of the Dutch Ministry of Security and Justice, is considering to have a NAND Flash emulator with specific requirements developed.

Background

The amount of forensic cases with consumer electronic devices using hardware assisted encryption is rising. In many of these cases the electronic devices have non-volatile memory, for instance NAND Flash memory. Non-volatile memory is a type of memory that does not need to be powered to keep its content. With current low level non-volatile memory extraction methods the NFI is not able to solve all hardware assisted encryption problems. Finding new hardware security vulnerabilities might be a useful extension to existing methods.

Goal

One of the attack methods could be a flexible NAND Flash emulator that facilitates reverse engineering of hardware. A NAND Flash emulator is a device that can be connected to the consumer electronic device, replacing the original NAND Flash memory chip and act as a fully functional replacement of the NAND Flash chip. A flexible NAND Flash emulator would enable the engineer to revert to a previously existing NAND Flash content in an automated test environment and in a matter of seconds.

Product

Supplier should be able to deliver a NAND Flash emulator that is capable to

- supporting basic 'Toggle' and ONFI 4.0 NAND Flash interface commands
- support the emulation of at least 512GB of NAND Flash memory
- be of flexible architecture, so that new and/or manufacturer dependent protocols deviations can be implemented easily afterwards
- support monitoring of NAND Flash commands

2. Ministry of Security and Justice

The Ministry of Security and Justice is responsible for maintaining the rule of law in the Netherlands, so that people can live together in freedom, regardless of their life-style or views. The Ministry is working towards a safer, more just society by giving people legal protection and, where necessary, intervening in their lives. We sometimes have to take radical measures: divesting parents of parental responsibility, for example, or putting convicted criminals in prison. We also give people new prospects: for example, we help prisoners return to society and provide support for victims of crime. These are all measures that only the Ministry of Security and Justice is entitled to take. The law is about people.

More information on the Ministry of Security and Justice can be found:

www.rijksoverheid.nl/ministeries/venj

3. The Netherlands Forensic Institute (NFI)

The Netherlands Forensic Institute (NFI) is one of the world's leading forensic laboratories. From its state-of-the-art, purpose-built premises in The Hague, the NFI provides products and services to a wide range of national and international clients.

For a number of years now, the NFI has been developing a wide range of products and services aimed at helping law enforcement agencies to access policing information with high added value. With expertise in over thirty forensic disciplines, the NFI is able to serve a wide range of organizations in the fields of law enforcement, public order and security worldwide. Most are part of the criminal justice 'supply chain' – the police, public prosecutors, the judiciary and defence counsel. Increasingly, however, other public order and security organizations are also interested in our work. These include intelligence services, border agencies, first-responders and regulators, as well as international bodies such as competition authorities and the United Nations. This policy of investing heavily in innovation has enabled us to slash our average delivery times for services by over 90%. By sharing the results of our innovations with our clients in the form of products and services, we are able to make their jobs easier and more cost-effective. And by listening closely to their needs and where appropriate entering into partnerships with them, we seek to continue to direct our research in those areas where it will have the biggest impact and enable us to best serve our clients' needs.

More information on the NFI can be found: <https://www.forensicinstitute.nl/>

4. Request for information

This request for information is published on TenderNed and placed on TED . With this request for information we ask organizations in the field of digital technology to answer the questions in the attachment. Organizations can only respond to this request by e-mail (i.morselt@minvenj.nl) You are requested to enter the wanted information by filling in, signing and mailing the attachment to i.morselt@minvenj.nl, including additional information when available.

Please observe the deadlines for this request of information as stated below. Information that is submitted after the deadline will not be reviewed.

5. Planning request for information

Topic	Deadline	Time
Publication request for information	8 August 2017	
Possibility to submit questions	16 August 2017	12:00
Publication of the answers to the questions (target date)	21 August 2017	12:00
Deadline submitting written reaction tot the request	28 August 2017	12:00

6. Contact

The contact person for this request is Ms Ingrid Morselt

If you have questions, you are kindly requested to exclusively contact the contact person via e-mail (i.morselt@minvenj.nl).

7. Questions and answers

As can be seen in the planning, there is an opportunity to submit questions. We kindly ask you to focus on the aspects relating to the NAND Flash Emulator and the process of this request. The Ministry of Security and Justice can decide not to answer all questions.

8. Goal of request for information

Goal of this request for information is to have a view of which organizations are capable of delivering the development of the requested product. On the basis of these answers the NFI will decide on a purchasing strategy.

9. Rules

- The request for information is non-committal. The NFI is in no way obliged to draw up a contract with any of the organizations that has entered its information.
- The goal of this request is to investigate which organizations can deliver the development of the requested product;
- The outcome of this request for information will be used to decide on a purchasing strategy;
- No rights or privileges can be drawn from participating in this request for information or the information that has been submitted;
- The NFI is not obliged to use the results from this request for information. If the NFI wishes to use any information from this request, it will be anonymized and will the commercial confidentiality be guaranteed. You can (and should) point out which information has to be considered confidential, provided that this is understandable or substantiated;
- Entering this request for information does not entitle to compensation payment.

We thank you for your interest and response.

Attachment Answersheet included.