



Netherlands Forensic Institute
Ministry of Security and Justice

Recovering data from mobile phones

An easy, cost-effective service based on the NFI
Memory Toolkit by the Netherlands Forensic Institute



Mobile phones – a rich source of valuable information

Mobile phones can contain vital information that can assist in solving a crime, clearing a suspect or breaking open a case. This information may take various forms (images, text messages, GPS data, etc.).

However, accessing this data is not always easy. The mobile phone may be password-protected, data on it may have been completely or partially deleted by the user, or the phone itself may have been badly damaged.

To extract as much data as possible from such devices, the NFI has developed a unique universal forensic solution – the NFI Memory Toolkit. This toolkit makes an exact copy of the memory chips in mobile phones, USB flash drives and Solid State Disks (SDDs), making it possible to read out all the data present on the chips.

The NFI Mobile Data Recovery Service

The NFI Memory Toolkit is available exclusively from the NFI for purchase by governmental organisations worldwide. (For details of how to order, see back of this brochure.)

Operating the NFI Memory Toolkit, however, requires specialist skills, specific laboratory conditions and special equipment for removing the chip. All in all, this involves a significant investment of time and resources. Independent use of the Toolkit is therefore best suited to large forensic laboratories that need to carry out such work regularly.

Now, to make it possible for all law enforcement bodies, courts of law and government agencies to enjoy the many advantages of mobile data recovery, the NFI has made the NFI Memory Toolkit available as a service: the NFI Mobile Data Recovery Service.

How does the NFI Mobile Data Recovery Service work?

Simply send a phone to the NFI for data extraction. We remove the memory chip, create an exact copy of the data on it, and send this data back to you. You can then use commercially available decoding tools to decode it back to regular information (e.g., incoming call records, network data, browsing history, etc.). If such decoding tools are not available, specialised companies can undertake this task for you.

The benefits of the NFI Memory Toolkit

The NFI Mobile Data Recovery Service offers all the benefits of the stand-alone NFI Memory Toolkit, but at a greatly reduced price. The Toolkit makes a 1-to-1 copy of the data on a memory chip that has been extracted from a mobile phone.

All the data

Unlike other devices, which access only allocated memory, the NFI Memory Toolkit accesses all data stored on a phone memory chip – including not only spare areas and bad blocks, but also slack space and unallocated space, both of which may contain ‘deleted’ data. As a result, investigators have a much better chance of finding valuable information.

All types of phones

The Memory Toolkit works on almost every chip in almost every type of phone.

All the data remains unchanged

Unlike some other methods of reading data from memory chips, the method used by the NFI Memory Toolkit ensures that no data is changed.

Damaged or broken devices

The NFI Memory Toolkit can read out memory chips from non-functioning mobile phones (e.g., damaged by heat, water, force or bodily fluids) provided the memory chip itself is still intact.

Password-protected devices

Memory chips from password-protected mobile phones can also often be read.*

*Note that some encryption methods used in phones make it impossible to decrypt or interpret the copy. The NFI (see back of brochure for contact information) will be able to tell you in advance whether your mobile device falls into this category.

A close-up photograph of a male technician with a beard, wearing a white lab coat and purple nitrile gloves. He is focused on working on a severely damaged, black mobile phone. He is using a thin metal tool to carefully manipulate the internal components of the phone. The background shows a laboratory environment with various electronic testing equipment, including a multimeter and a soldering station, on a workbench.

The NFI Mobile Data Recovery Service

Complete data

The Service provides you with all the data stored on the memory chip of a mobile phone – in many cases even if the phone has been burned, submerged in water, is password-protected, or if the data has been 'deleted'.

Fast service

Although complex cases may take several months, simpler cases can be completed within two weeks.

'No surprises' pricing

In straightforward cases, the data can be made available for a price of EUR 1,500 (excl. shipping). Where the damage is extensive and/or the phone type has not previously been analysed by the NFI, the charge will be proportionately higher. A quotation is always provided before work commences.

What does the NFI Mobile Data Recovery Service include?

The unique NFI Mobile Data Recovery Service includes the following:

Conservation

If a phone has been severely damaged, we undertake (as far as is necessary) any conservation efforts required to preserve the memory chip.

Removal

We safely remove the memory chip from the mobile phone and prepare it for data extraction.

Copying

We create an exact copy of the data on the memory chip (including information from spare areas, bad blocks, etc.), and send this copy back to you.

Important information

Since the NFI Mobile Data Recovery Service is tailored, flexible and highly specialised, we need to receive certain information from you as soon as possible before commencing work. It is also important that you do not inadvertently do anything that could negatively affect the outcome of our work.

Before you do anything

Before you do anything at all, contact the NFI Front Office, Accountmanagement, Marketing & Sales (see back of brochure). One of our International Forensic Advisors will then take you step-by-step through what

you need to do immediately to stop any deterioration of the phone or chip (e.g., if it has suffered water or fire damage). Once a chip has been seriously affected by oxidation or electrolysis, it can no longer be read out with the NFI Memory Toolkit.

Please don't touch!

Do not try to extract the memory chip yourself, as it is easily damaged. To avoid disappointment, we can only accept chips that have not already been extracted from the phone.

Reference models

If the phone or memory chip is of a type that we have not worked with before, we will ask you to submit a working reference device containing the same memory chip. This is non-returnable.

Details of damage

If the phone is damaged, the Advisor will ask you for information about how, when and where it was damaged. This is not only to conserve the chip but also to protect NFI staff from hazardous materials.

Packing for shipment

The Advisor will also explain how the phone and chip should be prepared for shipment.

Quotation

Finally, the Advisor will ask you specific questions so that we can determine an accurate quotation for the work required.

Please also bear in mind that removing a memory chip from a device always damages the device beyond repair. The chip itself is usually not damaged in the removal process, but there is a very small chance that it may be, in which case data recovery will be impossible.

What do you get?

When we have read out all the retrievable data, you will be sent:

Through a secure web link:

The data extracted from the chip (encrypted for security reasons).

By mail or courier:

The original chip and mobile phone. Please note that the phone will be irreparably damaged. Any reference models supplied are non-returnable.

By email:

A report (in English) describing the procedure used and the results achieved.

What does the NFI Mobile Data Recovery Service cost?

The amount of work involved in recovering data from a phone or memory chip may vary considerably. This is why the service is charged at an hourly rate and you receive an estimate of the costs in advance. You will be billed only for hours actually required.

Simple or complex?

The cost of dealing with a phone that is undamaged and familiar to our analysts is EUR 1,500. In the case of a damaged or unfamiliar model, the cost will be higher. Please note that we can only determine with certainty whether the memory chip in a model is familiar to us after dismantling the phone. More complex cases are usually completed within 44 hours. In the first instance, you will therefore be asked to commit to this amount of work (EUR 6,600), but will only be charged for the hours actually worked. If we have not been able to resolve the case within that timeframe, we will contact you to report on our progress and to give you an estimate of

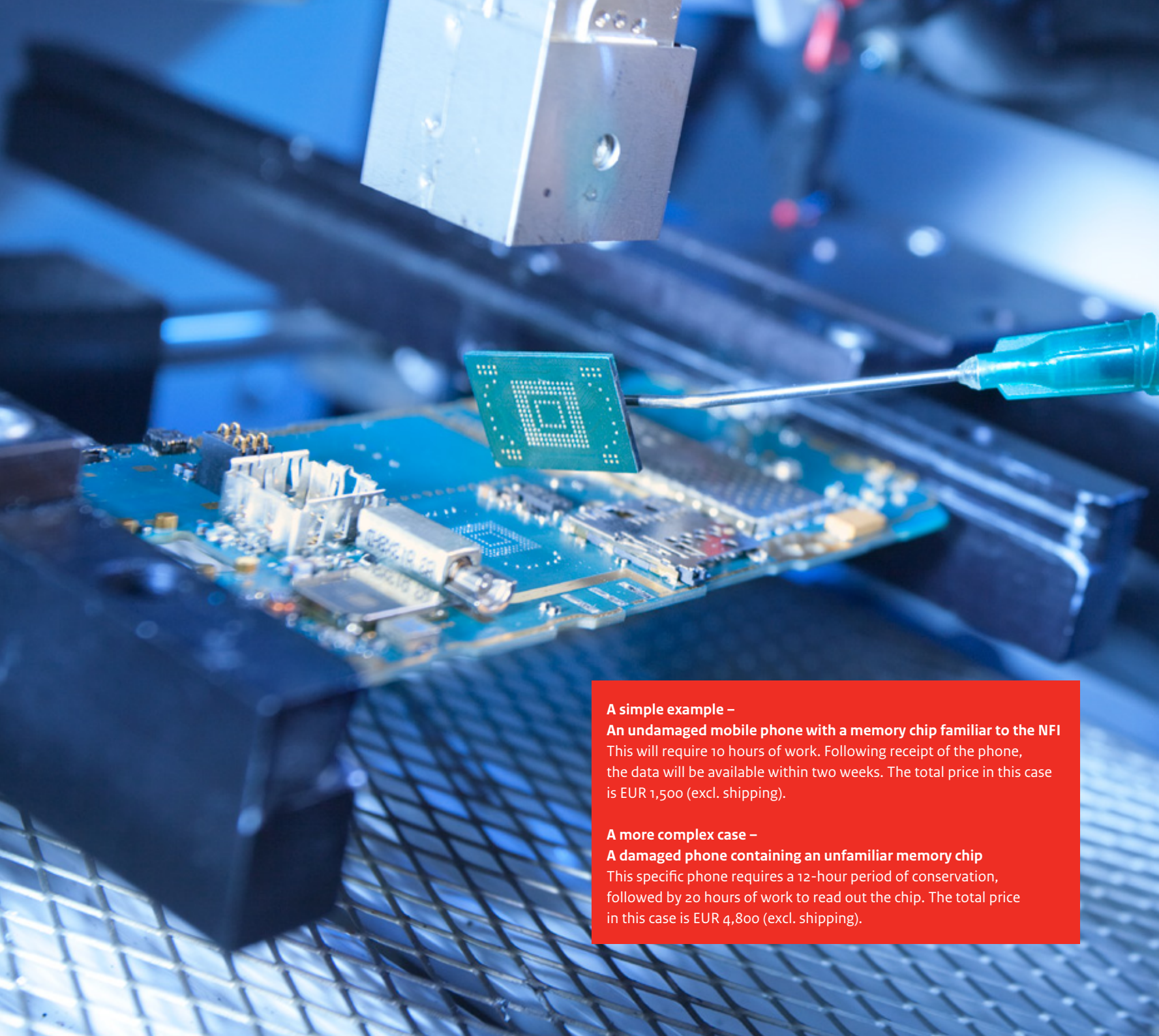
the work still required. You can then choose to have us continue the task (committing to another block of 44 hours and paying only for the hours worked) or stop the project at that point. Very few cases cost more than EUR 10,000.

Conservation

In the case of a damaged phone, steps will need to be taken to prevent any further deterioration of the phone itself and to conserve the memory chip before the data can be read out. If the damage has been caused by water, fire, brute force or bodily fluids, the preservation work typically takes 4 hours and costs EUR 600. If the damage has been caused by chemicals or other hazardous substances, the preservation work may take up to 22 hours (EUR 3,300). In that case, you will only be billed for the actual hours worked. Please note that we do not accept phones contaminated with substances that may endanger the health of NFI staff.

Delivery

Given the unpredictable nature of the work, we cannot specify a definite delivery date until we have received the phone and conducted a preliminary analysis. Delivery will then be confirmed on a 'best effort' basis, depending on capacity.



A simple example –

An undamaged mobile phone with a memory chip familiar to the NFI

This will require 10 hours of work. Following receipt of the phone, the data will be available within two weeks. The total price in this case is EUR 1,500 (excl. shipping).

A more complex case –

A damaged phone containing an unfamiliar memory chip

This specific phone requires a 12-hour period of conservation, followed by 20 hours of work to read out the chip. The total price in this case is EUR 4,800 (excl. shipping).



Information

For more information on the NFI Mobile Data Recovery Service, the Memory Toolkit and/or other products and services of the Netherlands Forensic Institute, please contact:

NFI Front Office
Accountmanagement, Marketing & Sales
Email accountmanagement@nfi.minvenj.nl
Telephone +31 70 888 66 40

Netherlands Forensic Institute
Ministry of Security and Justice

PO Box 24044 | 2490 AA The Hague | The Netherlands
T +31 70 888 66 66 | Fax +31 70 888 65 55

www.forensicinstitute.nl

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