



**INTERPOL**

**FIREARMS PROGRAMME**

**IBIN**

**INTERPOL BALLISTICS INFORMATION NETWORK**

**HANDBOOK ON THE COLLECTION AND  
SHARING OF BALLISTICS DATA**



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# **CHAPTER 1**

## **GENERAL INFORMATION**

# INTERPOL

The International Criminal Police Organization – INTERPOL is the world’s largest international police organization, with 190 member countries. Created in 1923, it facilitates cross-border police cooperation, and supports and assists all organizations, authorities and services whose mission is to prevent or combat international crime. INTERPOL aims to facilitate international police cooperation even where diplomatic relations do not exist between countries. By charter, INTERPOL member countries set up and maintain National Central Bureaus (NCBs). The NCBs are normally departments of the National police authority in each member country, but can also have staff from several police agencies according to the member country’s structure. The NCBs are connected to the General Secretariat through the I-24/7 Network and provide the primary conduit for investigative inquiries and responses.

INTERPOL has identified four core functions on which it concentrates its efforts and resources:

**Secure global police communications services** – Accomplished through I-24/7, INTERPOL’s secure global police communications system.

**Operational data services and databases for police** – INTERPOL manages a range of databases with crucial information about international criminal activity, which can lead to the dissemination of critical crime-related data through one or more of the seven types of notices.

**Operational police support services** – With the 24-hour Command and Coordination Centre, INTERPOL can assist any member country in the following crime areas it has recognized: corruption; crimes against children; cybercrime; drugs and organized crime; financial crime; fugitives; high-tech crime; environmental crime; firearms offences; maritime piracy; pharmaceutical crime; public safety and terrorism; trafficking in human beings; trafficking in illicit goods and counterfeiting; vehicle crime; works of art; chemical, bacteriological, radiological, nuclear and explosives crime.

**Police training and development** – INTERPOL provides focused police training initiatives for national police forces in order to enhance the capacity of member countries to effectively combat serious transnational crime and terrorism.

The INTERPOL Ballistics Information Network (IBIN) serves all four of these functions in some capacity.

# INTRODUCTION

“Small arms and light weapons destabilize regions; spark, fuel and prolong conflicts; obstruct relief programmes; undermine peace initiatives; exacerbate human rights abuses; hamper development; and foster a “culture of violence”

## - United Nations Office for Disarmament Affairs

Firearms crime bleeds over into other crime areas. In almost every crime committed today, firearms are used to some degree. Firearms are used in theft, murders, kidnappings, organized crime, the drug trade, and much more. Furthermore, in a global society in which physical and virtual barriers between countries are continually being broken down, criminal activity becomes more and more international each day. The murder weapon from a shooting in one city often ends up in another city, country, or continent. As criminals find easier ways to cross borders, police from around the world are increasingly hampered by national boundaries, unable to follow criminal leads outside of their jurisdictions. The obstacles that borders present impede law enforcement officials from tracking down crucial evidence needed to locate, arrest, and convict criminal masterminds. Indeed, from corruption and organized crime, to human trafficking and terrorism, firearms and their related evidence know no borders. In 2008, INTERPOL participated in a teleconference in which a consensus agreement was reached among 28 ballistics experts representing 14 countries as to the need for an international ballistics data-sharing network. Participants included representatives from Australia, Austria, Botswana, Canada, Croatia, Denmark, Greece, Italy, Kenya, Kosovo, Namibia, the Netherlands, South Africa, the United Kingdom and the United States.

As you will discover by reading this manual, INTERPOL has taken a giant leap towards breaking down the barriers of combating international criminal activity by establishing IBIN. Powered by the IBIS® Correlation Server at INTERPOL Headquarters in Lyon, France, IBIN is the only large-scale international ballistics data-sharing network in the world.

Using IBIN, law enforcement officials can provide, request, and exchange crucial evidence on open cases that have the potential to span across several countries. Since the majority of crimes involve firearms, and adding in the fact that firearms often leave behind trace evidence such as bullets and shell casings, IBIN can

exchange ballistics evidence among Member States with the goal of establishing connections and links between critical pieces of evidence from multiple countries where no known links were before. By connecting ballistics evidence from multiple countries, police have the potential to expedite tracking down and stopping criminal activity that had previously evaded the law because of its international element of operation.

This user manual for IBIN has been assembled and edited for the benefit of IBIN system users. With this manual in hand, an IBIN user can explore the history of the IBIN programme and the thought process leading to its inception. This manual is also a guide to getting involved with the programme, providing information on how to join the network and maintain membership. Most importantly, this manual is a handbook on how to use IBIN, allowing users to operate the network at the highest level of potential.



# INTERPOL FIREARMS PROGRAMME

The criminal misuse of firearms poses a threat to the safety of citizens in any country, but also a wider threat to security, peace, stability and development. Firearms are easy to conceal and transport, and offer lucrative profits to criminals trafficking in illicit small arms and light weapons. No country is unaffected by firearms violence. While each year, firearms are used in more than 245,000 homicides worldwide (excluding war-torn countries), this is only a small percentage of all crimes committed with firearms, which are widely used to threaten and support other criminal acts.

## ➤ **Crime prevention and response**

INTERPOL offers powerful tools which can help member countries to improve their collection and analysis of the information that can be gleaned from inside and outside a firearm, in order to prevent and solve firearm-related crime.

- **The INTERPOL Firearms Reference Table (IFRT)** is an interactive online tool that provides a standardized way to identify and describe firearms, and enables an investigator to obtain or verify the details of a firearm – including the make, model, calibre and serial number. The IFRT contains more than 250,000 firearm references and 57,000 firearm images, as well as extensive information on firearm markings. The proper identification of a firearm is a fundamental aspect of police investigations because it significantly increases the chances of identifying its ownership history through an international trace request.
- **The INTERPOL Ballistic Information Network (IBIN)** provides a global platform for collecting, storing, and comparing ballistic data. Just as fingerprint data can link crimes and criminals across international borders, so too can the international sharing of ballistic data. It helps police to find connections between separate crimes that might otherwise have gone undetected. IBIN is the first and only large-scale international ballistic data sharing network. This manual is devoted to best practices for IBIN.
- **The INTERPOL Illicit Arms Records and tracing Management System (iARMS)** is the first centralized system for reporting and querying lost, stolen, trafficked and smuggled firearms. Authorized users can query the iARMS database and instantly determine whether the firearm they seized has been reported to INTERPOL by another member country. It can also assist member countries by providing an enhanced tracing system, and enable countries to statistically chart their requests and responses for international assistance. The system is funded by the European Union.

➤ **Analysing crime data**

Criminal intelligence analysis is recognized by the law enforcement community as a valuable tool that can help to provide timely warning of threats to support operational police activities. INTERPOL is developing its capacity to contribute to firearm-related criminal investigations by conducting and disseminating research and analysis on firearm-related crime trends and techniques, as well as intelligence on firearm-trafficking routes and methods.

➤ **International alert system**

INTERPOL's unique system of notices is used to alert member countries to firearm-related threats. An Orange Notice can be published to warn about potential threats posed by disguised firearms which may not be easy to detect under normal circumstances. A Purple Notice can be published to share information about specific firearms, their parts and related objects, as well as modus operandi for firearm-related crimes including firearm trafficking.

➤ **Training and capacity building**

INTERPOL offers a variety of capacity-building initiatives that target firearms. The aim is to equip police and their law enforcement partners with the knowledge, skills and best practices to meet today's firearm crime challenges. Our courses focus on international cooperation and the use of INTERPOL's tools and services.

From a basic online course on firearms identification to intensive classroom-based courses on detecting and combating firearm-related crime, we provide a range of training opportunities. We take an inter-agency approach, and provide intercultural, bilingual training as appropriate.

## **CHAPTER 2**

# **BALLISTICS ON THE INTERNATIONAL STAGE**

# INTERPOL BALLISTICS INFORMATION NETWORK

Every firearm leaves unique microscopic markings on the surfaces of fired bullets and cartridge cases – a sort of “ballistics fingerprint.” By utilizing technology that can read and catalogue these ballistics fingerprints, such as Forensic Technology’s **Integrated Ballistics Identification System (IBIS®)**, users are able to share and compare thousands of ballistics exhibits in a matter of hours within national boundaries.

**IBIN** is a platform for the large-scale international sharing and comparing of ballistics data. In partnership with Forensic Technology, this network connects member countries or territories that use IBIS® and enables the cross-border exchange of ballistics data, taking the IBIS® system from the national to the international level.

Just as fingerprint data can link crimes and criminals across international borders, so too will the international sharing of ballistics data. IBIN will find connections between separate crimes that would otherwise have gone undetected. Over time, we anticipate that analysis of the shared ballistics data will reveal illicit firearms trafficking routes and provide police with critical information about firearms traffickers and other violent criminals.

## Who participates in IBIN?

**All INTERPOL member countries can participate in IBIN.**



**If an INTERPOL member country has the IBIS® technology**, it can directly connect to IBIN once the *IBIN participation agreements* have been implemented by the NCB and the national laboratory. This process is described in the pages below. Should an IBIN participating country want to leave the programme at any time, all submitted ballistics data from that country must also exit the network.

**An INTERPOL member country that is not a member of IBIN with the IBIS® technology, an INTERPOL member country without the IBIS technology, or an INTERPOL member country with a different technology** can benefit from IBIN’s reservoir of international ballistics data. Coordination is established between INTERPOL member countries via the NCBs for assistance in international ballistic searches.

Through this service, test fires or double casts of ballistics evidence are processed for entry into IBIN and correlations performed. Correlation results are sent to the requesting country and the General Secretariat.

The procedure for submitting exhibits **for entry into IBIN** is as follows:

1. **Contact your country's INTERPOL NCB and an INTERPOL IBIN representative** to inform them that you have ballistics exhibits that you wish to submit for entry into IBIN. A case-by-case study will determine the process.
2. Test-fire the weapon in question or, if the exhibits are from a crime scene, use the double-casting techniques outlined in **CHAPTER 3, Operating within IBIN, Validated process for creating double casts** (p 61), to create casts of the evidence.
3. **We recommend** that you complete the **Cast or Test-Fired Ballistic Evidence Transmittal Form** or similar form, to ensure all submitted exhibits remain accounted for throughout the process. Attach your official laboratory report.

		<b>INTERPOL BALLISTIC INFORMATION NETWORK</b>				
<b>INTERPOL</b>		<b>Casted or Test Fired Ballistic Evidence Transmittal Form</b>				
<p><i>This form is to accompany double-casts and/or test fires of ballistic evidence sent between IBIN and non-IBIN INTERPOL member countries and the General Secretariat for analysis purposes. This transmittal form is to ensure that all submitted exhibits remain accounted for throughout the process.</i></p>						
Date & Reference No.	From:	To:	Description:	Request:	Action/Misc.:	

4. All castings must be accompanied by a **“Certificate of authenticity of evidence submitted”** (p. 82) or a similar certificate, to assure the cast(s) was/were made from original evidence.
5. The following information must be supplied:
  - Which regions or countries within IBIN would you like the exhibit(s) to be searched? (Where does the investigative information and intelligence lead?)
  - Will you need the exhibits returned to you?
  - What was the offence?
  - What was the date of occurrence of the offence?
  - Is the date of the occurrence unknown?
  - Is there a time constraint? (Is there a defendant in custody?)
  - Were there additional bullets or cartridge cases recovered that have not been submitted?

### **What are the benefits of IBIN?**

The IBIS® technology has enabled countries to detect links between previously unknown crimes on a national scale. IBIN allows police to detect these links in an international arena. By joining IBIN, member countries become part of an international network, giving participating countries the opportunity to search their ballistics data against those of another IBIN participating country. Bullets fired from the same gun used in multiple countries can be searched (correlated) with data from other countries. Hits within IBIN can provide essential leads for making connections between crimes and crime scenes in other countries and for locating criminals who escape prosecution by jumping borders. Over time, as IBIN grows, it will also provide statistics and intelligence about the movement of illicit firearms.

# **IBIN PARTICIPATION AGREEMENTS**



## **IMPLEMENTING RULES FOR THE INTERPOL BALLISTICS INFORMATION NETWORK**

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# HOW DO I JOIN IBIN ?

Prerequisite: IBIS® equipment is required for IBIN membership.

The process for adding new countries or authorized national entities requires close coordination between the National Central Bureaus (NCBs), the laboratory and the INTERPOL General Secretariat.

The first step to participating in IBIN is for the NCBs to be aware of the “**INTERPOL General Conditions on the Processing of Data contained in IBIN**” (see p 18) that explain the main conditions under which member countries may use IBIN.

The second step is for the NCBs to authorize the laboratory to access the INTERPOL Information System. To do so, a “**Guidance Note on Providing Direct Access Rights to the INTERPOL Information System to National Entities**” (see p 25) is attached. It indicates the steps to be taken by an NCB to grant access to the INTERPOL Information System to a laboratory. It also included the following:

- **Four documents to complete, sign and return** (*originals are kept at the General Secretariat*)
  1. **Agreement between the INTERPOL National Central Bureau of (country) in (city) and (name of the authorized national entity) on Direct Access to the INTERPOL Information System** (*from NCB to Laboratory – see p 30*).
  2. **Two Circulars indicating that new access rights have been granted to a national entity** (*Notification to the General Secretariat and notification to other NCBs and international entities – see p 40 and 42*).
  3. **Letter of commitment** (*from Laboratory to the General Secretariat – see p 44*).

In addition, to ensure that the NCBs remain informed about all developments in investigations where IBIN is used, the INTERPOL General Secretariat requests that your national security officer provide an I-24/7 account to a firearms examiner to be determined by the national laboratory.

The next step in this process involves readying your system for connection to IBIN.



# INTERPOL GENERAL CONDITIONS ON THE PROCESSING OF DATA CONTAINED IN THE INTERPOL BALLISTIC INFORMATION NETWORK

## 1. DEFINITIONS

### **National Central Bureau**

*National Central Bureau* means any body designated by a country to perform the liaison functions provided for in Articles 32 of the Organization's Constitution.

### **National entity**

*National entity* means an entity legally authorized to fulfil the role of a public institution in enforcing the criminal law that has been authorized by the National Central Bureau of its country, by an agreement and within the limits determined by that National Central Bureau, to directly consult data processed in the INTERPOL Information System or to directly provide data for processing purposes within that System.

### **Source**

*Source* means any National Central Bureau which processes data in the INTERPOL Information System, and which is ultimately responsible for those data, or any international entity or private entity whose data are processed in the INTERPOL Information System, or on behalf of which data are recorded in the System, and which is ultimately responsible for them.

### **Processing**

*Processing* means any operation or set of operations performed on data, whether or not by automatic means, such as collection, recording, consultation, transmission, use, disclosure and deletion.

## **Autonomous database**

An *autonomous database* means a specialized database not linked to the central database by an indexing system.

## **Ballistic data**

*Ballistic data* means the digital images of discharged bullets and cartridge cases.

## **Case information**

*Case information* means additional information linked to ballistic evidence and includes:

- **Country of origin – NCB reference**
- **Originating agency**
- **Event type**
- **Occurrence date**
- **Case reference number**

## **Offences**

The INTERPOL Ballistic Information Network has adopted the following offence categories to assist with investigations and with keeping the necessary statistics:

- **Offences against persons**
  - Assault
  - Kidnapping
  - Murder
  - Paedophilia
  - Sexual assault
  - Trafficking in human beings
  - Other offence against the person
- **Offences against property**
  - Armed robbery
  - Burglary
  - Extortion
  - Robbery
  - Theft
  - Other property-related offence
- **Specified Offence**
  - Drug offence
  - Environmental crime
  - Explosives / Weapons
  - Financial crime

Money laundering  
Terrorism  
Other specified offence

### **IBIN correlation request**

An *IBIN correlation request* is the act of electronically comparing the digital signatures of fired bullets or cartridge cases in IBIN.

### **Positive query result**

Means a presumed match between data already processed in the INTERPOL Information System and other data that are entered in this system.

### **Potential hit**

A *potential hit* means a likely positive result of a correlation request, pending examination by the designated authorized national entities.

### **Hit**

A *hit* is a positive result of a correlation request confirmed by evidence comparison.

## **2. PREAMBLE**

Pursuant to Article 2 of INTERPOL's Constitution, the aims of the Organization are to ensure and promote the widest possible mutual assistance between all criminal police authorities within the limits of the laws existing in the different countries and in the spirit of the "Universal Declaration of Human Rights", and to establish and develop all institutions likely to contribute effectively to the prevention as well as the suppression of ordinary law crimes.

Article 3 of INTERPOL's Constitution forbids the Organization from undertaking any intervention or activities of a political, military, religious or racial character.

The processing of data constitutes an essential tool for cooperation between all the INTERPOL member countries, thereby allowing the Organization to fulfil its mission.

The processing of data by the General Secretariat (within the Organization's buildings and premises) is regulated by the Rules on the Processing of Data (RPD) and the texts to which they refer.

One of INTERPOL's principal roles is the efficient and secure transfer between law enforcement agencies of police information, as reflected in its strategic and corporate priorities.

INTERPOL provides an ideal platform for replicating and correlating ballistic data by enabling each INTERPOL member country to retain ownership of its data, control deletion and disclosure, and ensure international access to the benefits of ballistic comparison.

To further international police cooperation in using and exchanging ballistic data by means of the Integrated Ballistic Identification System (IBIS®), INTERPOL has developed a direct-access autonomous database to compare ballistic data across international borders.

### **3. PURPOSE AND FUNCTION**

The *INTERPOL General Conditions on the processing of data contained in the INTERPOL Ballistic Information Network* summarize the main conditions under which the INTERPOL member countries use the IBIS® technology for processing ballistic data in a centralized database located at the INTERPOL General Secretariat for effective cross-border comparison. This comparison enables international “cold hits” to be made while providing maximum flexibility and security.

The processing of ballistic data and correlation requests as provided for under these General Conditions will be conducted in accordance with INTERPOL’s Rules on the Processing of Data and texts to which they refer.

Ballistic data held by the General Secretariat are processed in accordance with the above-mentioned Rules. INTERPOL will not retain any personal data linking ballistic evidence to any individual. There is no connection between INTERPOL’s Criminal Information System (ICIS) and the autonomous IBIN.

Participating INTERPOL member countries may access IBIN electronically by submitting ballistic data or requesting correlations in accordance with INTERPOL’s rules and regulations, and the present General Conditions. Participating countries are requested not to process any personal data in IBIN.

### **4. RESPONSIBILITIES AND ROLES**

INTERPOL National Central Bureaus (NCBs) ensure liaison with the various departments in the country, with other NCBs and with INTERPOL’s General Secretariat.

An authorized national entity, as defined above, must have signed with its NCB the enclosed agreement on direct access to the INTERPOL Information System before authorization is granted by its NCB, which will notify the General Secretariat accordingly (Circular on new access rights granted to a national entity).

Pursuant to INTERPOL's rules, INTERPOL member countries as sources of the ballistic data retain control over the submitted information (submission, access, consultation, deletion etc.) through IBIN. They remain responsible for keeping the information updated.

To aid international ballistic data-sharing and promote effective cross-border comparison, INTERPOL requires that ballistic data submitted to IBIN be processed in accordance with the national laws of the contributing member country, with international conventions to which that country is a party, and with INTERPOL's Constitution.

In addition, INTERPOL recommends that ballistic data submitted to IBIN be analysed by an authorized national entity and, where an investigation of a hit so requires, that a casting or additional test-fire be obtained for analysis by forensic experts in the requesting jurisdiction.

Upon request, the General Secretariat will report on numbers of ballistic records held and hits reported.

## **5. APPLICATION**

### **5.1 Access**

Access to the IBIN server is through INTERPOL's Ballistic Information Network.

Only National Central Bureaus and designated authorized national entities may access INTERPOL's Ballistic Information Network.

This access control applies to all submitted ballistic data.

When an INTERPOL member country requests deletion of information recorded in the INTERPOL Criminal Information system (ICIS), a separate deletion through IBIN is required from the source to delete ballistic data held in IBIN.

## 5.2 Data Processing

The INTERPOL Ballistic Information Network has been designed to provide the opportunity for international ballistic data correlation. National Central Bureaus and designated authorized national entities may add ballistic data directly to the autonomous database. National Central Bureaus and designated authorized national entities may initiate a correlation search against the ballistic data.

IBIN will automatically generate correlation results for all IBIN correlation requests.

To enable further inquiries, an INTERPOL member country notified of a hit may communicate to or request additional information from another country, subject to any restrictions.

### 5.3 Authorized entity – specific information

The National Central Bureau must ensure, prior to granting direct access to an authorized national entity, that the said entity:

- accepts INTERPOL’s legal framework governing the processing of information for the purposes of international police cooperation;
- accepts the present *General Conditions on the processing of data contained in the INTERPOL Ballistic Information Network*;
- accepts responsibility for the integrity of its data, and their submission and deletion;
- accepts that network access to its system must be available 24 hours a day;
- accepts that its network line performance must conform to Forensic Technology’s “Specifications for High-Speed Internet”;
- recognizes that cross-border ballistic data comparison can only be carried out if reciprocal access is granted;
- recognizes that the General Secretariat will not permit downloading of INTERPOL member countries’ ballistic data from IBIN to another authorized entity unless the source member countries give the General Secretariat express written permission;
- recognizes that upon deletion initiated by a member country, ballistic data and any links made by hits will be destroyed. Under this provision, when an INTERPOL member country deletes ballistic data, INTERPOL may only retain submitted case information, which is sufficient to identify the source country and type of crime for statistical purposes only.

## 5.4 Caveats

- When INTERPOL member countries are notified of a hit, the contributing countries may then determine whether they release further information pertaining to the specific ballistic data. INTERPOL member countries provided with further information from another member country in this manner will comply with disclosure rules applied by the contributing member country.





## GUIDANCE NOTE ON PROVIDING NATIONAL ENTITIES WITH DIRECT ACCESS RIGHTS TO THE INTERPOL INFORMATION SYSTEM

### INTRODUCTION

1. INTERPOL encourages National Central Bureaus (NCBs) to extend access to the INTERPOL Information System (IIS) to national institutions involved in criminal-law enforcement activities.<sup>1</sup> Such an extension is provided under Article 21 of INTERPOL's Rules on the Processing of Data (RPD), which lays down the conditions under which an NCB may grant **direct access** rights to the IIS at national level, i.e. by using automatic means and without assistance from the General Secretariat.<sup>2</sup>
2. The IIS consists of "*all the structured material resources and software used by the Organization – databases, communications infrastructure and other services – to process data through its channels...*".<sup>3</sup> Nevertheless, access for national entities is **limited to** direct consultation and/or supply of data in the Organization's police databases.
3. This note explains the steps to be taken by an NCB wishing to extend access to the IIS to such national institutions, as well as the responsibilities attached to this undertaking.

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<sup>1</sup> An example for such national institutions is cybercrime units – see General Assembly Resolution No. AG-2008-RES-07 on "Extension of the I-24/7 Communications System to Cybercrime Units to Facilitate Timely Information Exchange".

<sup>2</sup> See definition of "direct access" under Article 1(16), RPD.

<sup>3</sup> Article 1(4), RPD.

I. **STEPS TO BE TAKEN BY AN NCB WISHING TO EXTEND ACCESS TO THE IIS TO A NATIONAL ENTITY**

**Step 1: Identifying the national entity**

4. Not all types of national institutions may be granted access to the IIS. Access rights may only be granted to “**national entities**”, which Article 1(8) of the RPD defines as “*any entity legally authorized to fulfil the role of a public institution in enforcing the criminal law ...*”. NCBs must thus ensure that the nature and scope of activities of the institution to which they want to grant access correspond to that definition.
5. In addition, the activities carried out by that national institution must not be of a political, military, religious or racial character.<sup>4</sup> Thus, for example, access could not be granted to an institution whose activities are of a predominantly military character.

**Step 2: Conformity with national laws and INTERPOL rules**

6. Extending access to the IIS should be done in compliance with:
  - (a) national laws. Accordingly, prior to extending access to a national entity, the NCB must verify that its country’s laws allow it.
  - (b) INTERPOL’s rules and regulations, such as Article 3 of the Constitution mentioned above.
7. To that end, the NCB should put in place procedures that will ensure conformity with national laws and INTERPOL’s rules and regulations. These procedures should include instructions concerning the security and the use of data, since each participant in the IIS – including the national entities – is responsible, firstly, for “*adopting an appropriate level of security at least equivalent to the minimum level of security laid down in the security rules established by the General Secretariat*”<sup>5</sup> and, secondly, for ensuring that “*their users observe [INTERPOL’s] Rules, particularly with regard to the quality of the data they enter in the system and their of the data consulted therein ...*”<sup>6</sup>.

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<sup>4</sup> Article 3, Constitution.

<sup>5</sup> Article 116, RPD.

<sup>6</sup> Article 120(1), RPD.

8. In this respect, it is stressed that each participant in the IIS, including the national entities, must appoint:
  - (a) a security officer, to ensure the security of the System and to monitor the access of end users in his or her country;<sup>7</sup>
  - (b) a data protection officer, to ensure the quality of data and their compliance with the RPD.<sup>8</sup>
9. The NCB must also ensure that the national entity is given appropriate and up-to-date training resources prior to authorizing it to access the System.

**Step 3: Determining the scope, arrangements and conditions for direct access to the IIS in a prior agreement**

10. The NCBs, as the national focal points within INTERPOL's structure,<sup>9</sup> have the discretion to decide whether to extend access to INTERPOL's databases to national institutions and, if so, to what extent.
11. In order to ensure the lawfulness of the extension, the scope, arrangements and conditions of the access and processing rights granted to the national entity must be laid down in a **prior agreement** between the NCB and the national entity. The General Secretariat has prepared a Template Agreement for this purpose (Appendix 1).

The prior agreement should indicate precisely the INTERPOL databases to which it is intended to grant the entity access, and the data-processing operations that will be authorized: direct consultation of data in the Organization's police databases or supplying such data. The list of databases available to national entities through direct access is attached at Appendix 2. An updated list is also available on the NCB dashboard:

<http://i247.ip/1247/Private/NCB/1247/security/entities/ListOfEntities.xls>.

12. A national entity may **not** be authorized:
  - (a) to use INTERPOL's notices and diffusions allowing the transmission of requests for cooperation and international alerts;
  - (b) to follow up on positive query results in accordance with the procedure outlined in Article 105 of the RPD;
  - (c) to communicate directly via INTERPOL's channels by means of messages.

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<sup>7</sup> As required by Article 117, RPD.

<sup>8</sup> As required by Article 121, RPD.

<sup>9</sup> See Article 32, Constitution.

13. It should also be noted that the RPD limits the purposes for which data may be processed in the IIS. Consequently, a national entity may, in principle, only be authorized to process data for **purposes of international police cooperation**, an exhaustive list of which is provided in Article 10(2) of the RPD. NCBs wishing to allow a national entity to process data for other purposes of international police cooperation or for administrative purposes should first contact the General Secretariat.

#### **Step 4: Informing the General Secretariat**

14. For purposes of transparency, and in order to ensure that the national entity benefits from the appropriate connection to the INTERPOL network, the NCB must send a **notification** (see Appendix 3) to the General Secretariat on at least four occasions:
- (a) on finalizing the Agreement authorizing the national entity to access the IIS. The NCB should, among other things, notify the General Secretariat of the purpose, nature and scope of the access and processing rights granted. The General Secretariat has made a Template Notification available for this purpose;
  - (b) in the event of a problem or incident affecting the national entity's information system;
  - (c) if there is a change to the access or processing rights granted to the national entity;
  - (d) on termination of the Agreement between the NCB and the national entity, and withdrawal of the access rights granted.
15. The Agreement authorizing a national entity to access the IIS only becomes effective 30 days after notification of its signature to the General Secretariat.

#### **Step 5: Informing all National Central Bureaus and international entities:**

16. For purposes of transparency, the NCB must also send a notification (see Appendix 4) to all other National Central Bureaus and international entities.

#### **II. ONGOING RESPONSIBILITY OF THE NCB TOWARDS ITS NATIONAL ENTITY**

17. In carrying out its liaison functions, the NCB remains responsible on a permanent basis vis-à-vis the General Secretariat and other participants in the System for the processing of data by its national entity.
18. To ensure compliance with the Rules, Article 123 of the RPD requires NCBs to **evaluate** their national entities on a regular basis, and to report on this evaluation to the General Secretariat at least once a year. The evaluation

should be based on the spot checks conducted, the training resources provided to staff, and the incidents reported to the NCB by the national entity.

**III. ASSISTANCE BY THE GENERAL SECRETARIAT**

19. On request, the General Secretariat can provide assistance to those NCBs wishing to extend access to the IIS to national institutions in their countries.
20. Such assistance may include:
  - (a) technical or legal advice;
  - (b) advice on the access and/or processing rights to be granted;
  - (c) security information and documentation;
  - (d) implementation guidance.

**[Template]**

**Agreement**

**between the INTERPOL National Central Bureau  
of *(country)* in *(city)***

**and**

***(name of the entity)***

**on**

**Direct Access to the INTERPOL Information System**

## Preamble

The INTERPOL National Central Bureau of (country) in (city) hereinafter referred to as “NCB (country)”,

And

The (name of the entity) (hereinafter referred to as (“xxx”),

Hereinafter collectively referred to as “the Parties”,

**Wishing** to coordinate their efforts within the framework of the missions assigned to them,

**Recognizing** that INTERPOL is an independent intergovernmental organization responsible for ensuring and promoting the widest possible mutual assistance between all criminal police authorities within the limits of the laws existing in the different countries and in the spirit of the Universal Declaration of Human Rights;

**Considering** that NCB (country) ensures, in accordance with Article 32 of the ICPO-INTERPOL Constitution, liaison with the various departments in (country), those bodies in other countries serving as National Central Bureaus, and the General Secretariat, and is therefore entitled to direct access to the INTERPOL Information System in the performance of its functions;

**Considering** that (xxx) is (provide brief description of aims and activities of the entity),

**Recalling** that INTERPOL encourages National Central Bureaus to extend access to the INTERPOL Information System to criminal investigation authorities involved in international police cooperation in their countries,

**Emphasizing** that this access shall be granted in compliance with INTERPOL’s Rules on the Processing of Data, in particular with its Article 21 and the “*Charter relating to access to the INTERPOL Information System by national entities*” appended to the said Rules, which require an agreement to be made between the NCB and the national entity,

**Affirming** the desirability of enabling (xxx) to [directly consult INTERPOL’s police databases] (and to...) [directly supply data for processing purposes in these databases],

**Have reached the following Agreement:**

## **Article 1**

### **PURPOSE**

- (1) The purpose of the present Agreement is to clearly set out the conditions under which (xxx) is authorized by NCB (country), pursuant to Article 21 of INTERPOL's Rules on the Processing of Data and in compliance with the "*Charter relating to access to the INTERPOL Information System by national entities*", to [directly consult data processed in,] (or to...) [directly supply data for processing purposes in] the INTERPOL Information System.
- (2) For the purposes of the present Agreement, (xxx) shall be considered a "national entity" as defined in Article 1(8) of INTERPOL's Rules on the Processing of Data.

## **Article 2**

### **LEGAL FRAMEWORK OF DIRECT ACCESS**

- (1) Direct access to and use of the INTERPOL Information System shall be subject to INTERPOL's Rules on the Processing of Information and to any procedures established in application of the said Rules.
- (2) The extent of the access and processing rights granted to the national entity are determined by NCB (country), in accordance to Article 21(1) of INTERPOL's Rules on the Processing of Data.
- (3) Both Parties shall ensure that:
  - (a) the access to and use of the INTERPOL Information System by (xxx) are directly connected with (xxx)'s activities and tasks, and do not violate the aims or the neutrality of INTERPOL;
  - (b) the national laws of (country) do not prohibit (xxx) from accessing and using the INTERPOL Information System.



### Article 3

#### SCOPE OF DIRECT ACCESS

- (1) (xxx) is granted the following direct access rights to the INTERPOL Information System:

❖ **Consultation of Data** *(delete where applicable)*

Database	Means of access

❖ **Management of their Data** (e.g. record, update, delete) *(delete where applicable)*

Database	Means of access

- (2) The processing of data in the INTERPOL Information System by (xxx) shall be carried out for the sole purpose of *(purpose)*.

## **Article 4**

### **OBLIGATIONS OF NCB (COUNTRY) TOWARDS (XXX)**

- (1) In implementing the present Agreement, NCB (country) shall be responsible for the processing of data in the INTERPOL Information System by (xxx).
- (2) NCB (country) shall inform (xxx) on an ongoing basis about :
  - (a) the rules, procedures and INTERPOL tools necessary for (xxx) to exercise its access and processing rights;
  - (b) the access restrictions it has placed on other NCBs or international entities.
- (3) NCB (country) shall be responsible for defining and granting individual rights to access the INTERPOL Information System to authorized users of (xxx), and for keeping an up-to-date register of the names of the persons and the access rights they have been granted.
- (4) NCB (country) shall provide up-to-date training resources to the authorized users of (xxx), to ensure that they are aware of and are able to observe the provisions of the present Agreement.
- (5) NCB (country) shall endeavour to respond favourably to any request or query from (xxx) concerning the implementation of the present Agreement.
- (6) NCB (country) shall inform the INTERPOL General Secretariat of any violation or attempted violation of the information system of (xxx).

## **Article 5**

### **OBLIGATIONS OF (XXX) TOWARDS NCB (COUNTRY)**

- (1) (xxx) shall abide by the access restrictions placed by NCB (country).
- (2) (xxx) shall notify NCB (country) of changes of staff affecting the individual access rights it has been granted.
- (3) (xxx) shall be responsible for defining and granting individual rights to access the INTERPOL Information System to authorized users within its staff, and for keeping an up-to-date register of the names of the persons and the access rights they have been granted.

- (4) (xxx) shall notify NCB (country) of any security or data-processing incident affecting its information system or the implementation of the present Agreement.
- (5) (xxx) shall notify NCB (country) of any change in its structure, mission, activities or tasks, which may affect the access and processing rights it has been granted.
- (6) (xxx) shall designate and assign a security officer and a data protection officer, and put in place procedures with the aim of ensuring on a permanent basis that its users are respecting INTERPOL's Rules on the Processing of Data.

## **Article 6**

### **SUPERVISION AND MONITORING OF (xxx) BY NCB (country)**

- (1) In implementing the present Agreement, NCB (country) shall:
  - (a) carry out regular checks, remotely or on site, on the processing of data [entered] (or...) [consulted] in the INTERPOL Information System by (xxx), to ensure compliance with the present Agreement and INTERPOL's Rules on the Processing of Data;
  - (b) take the necessary preventive or corrective measures against (xxx) in the event of a processing incident;
  - (c) withdraw all or some of the access and processing rights granted to (xxx), in the event of a failure to comply with its obligations under the present Agreement and INTERPOL's Rules on the Processing of Data, or the repeated non-compliant processing of data.
- (2) NCB (country) may send (xxx) recommendations relating to the implementation of the present Agreement and INTERPOL's Rules on the Processing of Data with a view to helping it to resolve difficulties or bring processing incidents to an end.
- (3) NCB (country) shall consult (xxx) after any change of its structure, mission, activities or tasks, with a view to determining whether the access and processing rights of (xxx) should be adapted accordingly. NCB (country) may seek advice from the INTERPOL General Secretariat to that end.
- (4) Whenever necessary, and at least once a year, NCB (country) shall remind (xxx) of its role and responsibilities connected with the access and processing rights it has been granted.

## **Article 7**

### **POSSIBLE INTERVENTION OF THE INTERPOL GENERAL SECRETARIAT**

Both Parties agree that the INTERPOL General Secretariat, acting as general administrator of the INTERPOL Information System, shall be entitled to take any appropriate measures within the scope of INTERPOL's Rules on the Processing of Data to terminate any non-compliant processing of data, including withdrawing access to the INTERPOL Information System.

## **Article 8**

### **ENTRY INTO FORCE**

The present Agreement shall enter into force 30 days after notification of its signature to the INTERPOL General Secretariat.

## **Article 9**

### **AMENDMENT**

- (1) The present Agreement may be amended by mutual consent expressed in writing. Such amendment shall become effective on such date as determined by the Parties, and shall form an integral part of this Agreement.
- (2) NCB (*country*) shall notify the INTERPOL General Secretariat of any amendment to the present Agreement which may alter the scope or the conditions of the access and processing rights granted to (*xxx*).

## **Article 10**

### **TERMINATION**

- (1) Either Party may terminate the present Agreement by giving the other Party and the INTERPOL General Secretariat at least thirty days' notice in writing, unless otherwise agreed to by the Parties and in consultation with the INTERPOL General Secretariat.

- (2) Termination of the present Agreement shall only become effective once the Parties have agreed in writing on:
- (a) the retention or deletion of the data recorded by (xxx) in the INTERPOL Information System;
  - (b) the conditions for withdrawing the access and processing rights granted to (xxx).

In witness whereof, the undersigned, duly authorized representatives of the INTERPOL National Central Bureau (country) and of (xxx), have signed the present Agreement in two original copies on the dates appearing under their respective signatures.

For the INTERPOL National  
Central Bureau of (country) in (city)

For (name of the entity)

(Name)  
(Position)

(Name)  
(Position)

on \_\_\_\_\_  
(date)

on \_\_\_\_\_  
(date)

in \_\_\_\_\_  
(place)

in \_\_\_\_\_  
(place)

## Scope of Direct Access to INTERPOL Databases Applicable to National Entities

Database	Consultation		Management	
	Authorization	Means	Authorization	Means
Stolen and Lost Travel Documents (SLTD)	YES	<ul style="list-style-type: none"> <li>▶ eASF2;</li> <li>▶ FIND;</li> <li>▶ MIND; and</li> <li>▶ I-Batch</li> </ul>	YES	<ul style="list-style-type: none"> <li>▶ ASF Mail;</li> <li>▶ Push&amp;Pull; or</li> <li>▶ EasyForm</li> </ul>
Works of Art	YES	<ul style="list-style-type: none"> <li>▶ eASF2</li> <li>▶ I-24/7<sup>1</sup></li> <li>▶ HTTPS</li> </ul>	NO	▶ (not applicable)
ICSE – International Child Sexual Exploitation Images	YES	<ul style="list-style-type: none"> <li>▶ I-24/7<sup>2</sup></li> </ul>	YES <sup>2</sup>	<ul style="list-style-type: none"> <li>▶ Web Application</li> </ul>
DNA	YES	<ul style="list-style-type: none"> <li>▶ I-24/7<sup>1</sup></li> </ul>	YES	<ul style="list-style-type: none"> <li>▶ DNA Gateway; or</li> <li>▶ I-24/7 message<sup>3</sup></li> </ul>
Fingerprints	YES	<ul style="list-style-type: none"> <li>▶ eASF2; and</li> <li>▶ FIND</li> </ul>	YES	<ul style="list-style-type: none"> <li>▶ Web services<sup>4</sup>; or</li> <li>▶ I-24/7 message<sup>3</sup></li> </ul>
Stolen Motor Vehicle (SMV)	YES	<ul style="list-style-type: none"> <li>▶ eASF2;</li> <li>▶ FIND;</li> <li>▶ MIND; and</li> <li>▶ I-Batch</li> </ul>	YES	<ul style="list-style-type: none"> <li>▶ ASF Mail;</li> <li>▶ Push&amp;Pull; or</li> <li>▶ EasyForm</li> </ul>
Stolen Administrative Documents	YES	<ul style="list-style-type: none"> <li>▶ eASF2;</li> <li>▶ FIND;</li> <li>▶ MIND; and</li> <li>▶ I-Batch</li> </ul>	YES	<ul style="list-style-type: none"> <li>▶ ASF Mail;</li> <li>▶ Push&amp;Pull; or</li> <li>▶ EasyForm</li> </ul>
Edison TD	YES	<ul style="list-style-type: none"> <li>▶ I-24/7<sup>1</sup>; and</li> <li>▶ HTTPS</li> </ul>	NO	▶ (not applicable)
INTERPOL's Criminal Information System (ICIS)	YES	<ul style="list-style-type: none"> <li>▶ eASF2;</li> <li>▶ FIND;</li> <li>▶ I-24/7<sup>1</sup>;</li> <li>▶ I-Batch</li> </ul>	NO	▶ (not applicable)

<sup>1</sup> Restricted domain only

<sup>2</sup> Certified individuals only

<sup>3</sup> Message sent to the General Secretariat

<sup>4</sup> Available in 2013

iARMS	YES ▶ I-24/7;	YES ▶ Web application
IFRT	YES ▶ I-24/7; and ▶ https	NO ▶ Not applicable
IBIN	YES ▶ Dedicated network	YES ▶ Dedicated network
Dial-Doc	YES ▶ I-24/7; ▶ https	YES ▶ Web application

# Template

## Notification to the General Secretariat

Subject: *New access rights granted to a national entity – Notification procedure*

Date:

### CIRCULAR Ref.

NCB *(country)* wishes to inform the INTERPOL General Secretariat that new access rights to the INTERPOL Information System have been granted to *(name of the entity)*, following the “Agreement between the INTERPOL National Central Bureau of *(country)* in *(city)* and *(name of the entity)* on Direct Access to the INTERPOL Information System” which was signed on *(date)*, and in accordance with the procedure outlined in Article 21 of INTERPOL’s Rules on the Processing of Data.

*(Name of the entity)* has been granted direct access to the INTERPOL Information System as a national entity, as defined in Article 1(8) of INTERPOL’s Rules on the Processing of Data. *(Name of the entity)* is legally authorized to fulfil the role of a public institution in enforcing the criminal law in *(country)*, and has a mandate to *(brief description of aims and activities of the entity)*.



**(Name of the entity)** has been granted the following direct access rights to the INTERPOL Information System:

❖ **Consultation of data** *(delete where applicable)*

Database	Means of access

❖ **Management of their data** (e.g. record, update, delete) *(delete where applicable)*

Database	Means of access

The processing of data in the INTERPOL Information System by **(name of the entity)** shall be carried out for the sole purpose of **(purpose)**.

The management of the individual rights to access the INTERPOL Information System granted to authorized users of **(name of the entity)** shall be exercised by [NCB **(country)**] (or...) **(name of the entity)**.

The authorization for access to the INTERPOL Information System of **(name of the entity)** shall thus become effective 30 days after the date of the present notification, namely on **(date)**.

## Template

### Notification to other NCBs and international entities

Subject: *New access rights granted to a national entity – Notification procedure*

Date:

#### CIRCULAR

#### Ref.

NCB *(country)* wishes to inform other NCBs and international entities that new access rights to the INTERPOL Information System have been granted to *(name of the entity)*, following the “Agreement between the INTERPOL National Central Bureau of *(country)* in *(city)* and *(name of the entity)* on Direct Access to the INTERPOL Information System” which was signed on *(date)*, and in accordance with the procedure outlined in Article 21 of INTERPOL’s Rules on the Processing of Data.

*(Name of the entity)* has been granted direct access to the INTERPOL Information System as a national entity, as defined by Article 1(8) of INTERPOL’s Rules on the Processing of Data.

*(Name of the entity)* is legally authorized to fulfil the role of a public institution in enforcing the criminal law in *(country)*, and has a mandate to *(brief description of aims and activities of the entity)*.

**(Name of the entity)** has been granted the following direct access rights to the INTERPOL Information System:

❖ **Consultation of Data** *(delete where applicable)*

Database	Means of access

❖ **Management of their Data** (e.g. record, update, delete) *(delete where applicable)* M

Database	Means of access

The processing of data in the INTERPOL Information System by **(name of the entity)** shall be carried out for the sole purpose of **(purpose)**.

The authorization for access to the INTERPOL Information System of **(name of the entity)** shall thus become effective 30 days after the date of the present notification, namely on **(date)**.



## **LETTER OF COMMITMENT**

I, the undersigned

---

*(forename and family name, title of post in the authorized national institution concerned),*

duly empowered to represent the

---

*(name of authorized national institution concerned)*

located at

---

*(address of the national institution concerned)*

notify that

---

*(name of authorized national institution concerned )*

agrees to cooperate in the INTERPOL Ballistic Information Network (IBIN).

As a consequence, I hereby notify the INTERPOL National Central Bureau of

---

(country)

that the

---

(name of authorized national institution concerned)

hereby accepts the INTERPOL General Conditions attached that I have initialled, and the texts to which they refer.

The contact point(s) of

---

(name of authorized national entity concerned )

for the INTERPOL Ballistic Information Network (IBIN) are:

1. (Forename, family name, position, contact details)
2. (Forename, family name, position, contact details)

Done at \_\_\_\_\_ on \_\_\_\_\_

Signature:

Forename, family name, position:

Encl.: General Conditions duly initialled by \_\_\_\_\_  
(forename and family name).

**This document, duly signed and initialled, must be sent to the National Central Bureau concerned which will forward a signed copy to the INTERPOL General Secretariat.**

## **IBIN STEERING COMMITTEE**

The INTERPOL Ballistics Information Network Steering Committee was established and continues to work as the founding working committee for IBIN.

The Steering Committee brings together of a range of disciplines, including NCB officials and laboratory technicians who have a close relationship with ballistics data collection and analysis technology. All members of the Committee are from the member countries as well as from Forensic Technology and the INTERPOL General Secretariat.

The hard work, dedication and perseverance of the Committee members show in the strong foundation that IBIN has been given, and continue to show as the network grows and develops into a vital component in the fight against international crime.

## **CHAPTER 3**

### **OPERATING WITHIN IBIN**

## **A GUIDE TO USING THE IBIN NETWORK**

This section of the user manual is devoted to answering technical and procedural questions about how to navigate effectively in IBIN. For more information on the IBIS® technology, please consult the IBIS® User Guide.



# BEST PRACTICE FOR LAUNCHING IBIN CORRELATIONS

## Background

The core element that facilitates international data sharing within IBIN is the IBIS® Correlation Server (CS) hosted by INTERPOL. Each evening, the CS is populated with data duplicated from IBIN-member IBIS® TRAX-3D™ systems in a transparent manner that poses no strain on the host laboratory's daily workflow. This ever-growing international reservoir of ballistics images has created an IBIN "super database" that can be easily searched by IBIN-participating countries and, in a more limited capacity, by non-IBIN member countries. Results from these international correlations are returned from the IBIN CS to their initiating sites where visual image comparisons can be performed by qualified firearms experts.

An IBIS® Data Concentrator (DCX) is also hosted by INTERPOL as an option for countries with lower volume workloads that still wish to benefit from IBIN membership.

## Initiating an IBIN Search

To reduce the strain on both the laboratory workflow and IBIN, correlation searches within IBIN are currently launched manually. **It is strongly recommended that case-specific intelligence be the driving factor for any IBIN international correlation.**

Examples of case specific intelligence that should lead you to launch a correlation in IBIN can include, but are not limited to, the following cases:

- If the defendant arrested with the firearm is a foreign national whose country of origin is an IBIN participating country;
- If you have intelligence that the defendant recently travelled across borders of an IBIN participating country;
- If the vehicle associated with the firearm bears a foreign registration plate from an IBIN participating country;
- If you have intelligence that the vehicle has travelled across borders of one or more IBIN participating countries;
- If the victim was a foreign national whose country of origin is an IBIN participating country;
- If the firearm was not legally in your country and there is intelligence that it passed through or originated from an IBIN participating country;

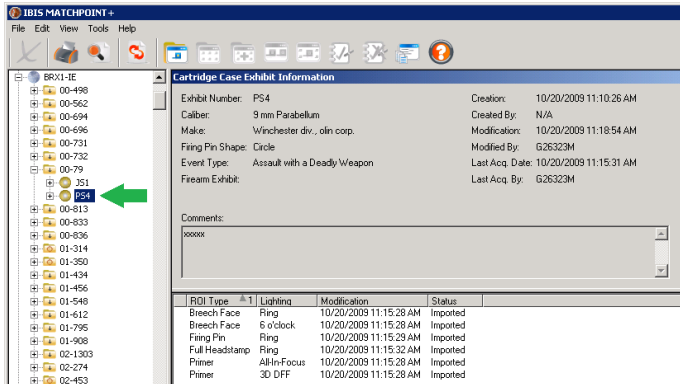
- If the ammunition is not normally available in your country, but is available in an IBIN participating country.
- In short, if there is any intelligence known to the investigator or ballistics expert that would indicate that the firearm, associated vehicle, defendant, victim, or other property associated with the crime travelled across borders shared with another IBIN participating country, a correlation in IBIN should be launched.

Just as the essence of the IBIN network is cooperation between its members on an international level, the same cooperation is equally essential between law enforcement agencies within an IBIN participating country. It is not uncommon for a country to have different specialized law agencies tasked with specific areas of responsibility, such as border protection, customs, and drug trafficking and human trafficking. A common factor shared by these agencies is that firearms are the “tools of the trade” for the criminals they investigate. It is critical to the success of IBIN and the perfection of international firearms investigations that these specialized agencies should be aware of IBIN’s capability to search internationally. It will allow them to apply their established investigative knowledge to initiating intelligence-led queries against IBIN. Furthermore, initiating searches between two or more IBIN participating countries where there are known links between criminal entities or groups will generate the greatest possibility of success.

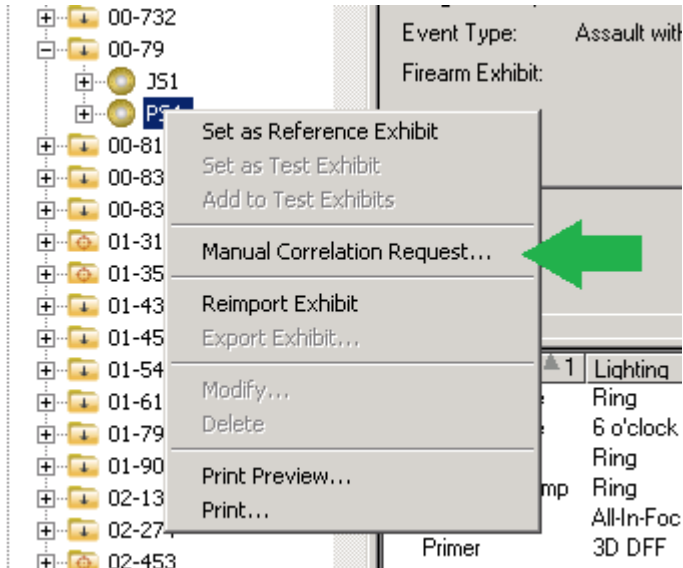
## IBIN Members

To initiate a search in IBIN, the user must perform the following steps.

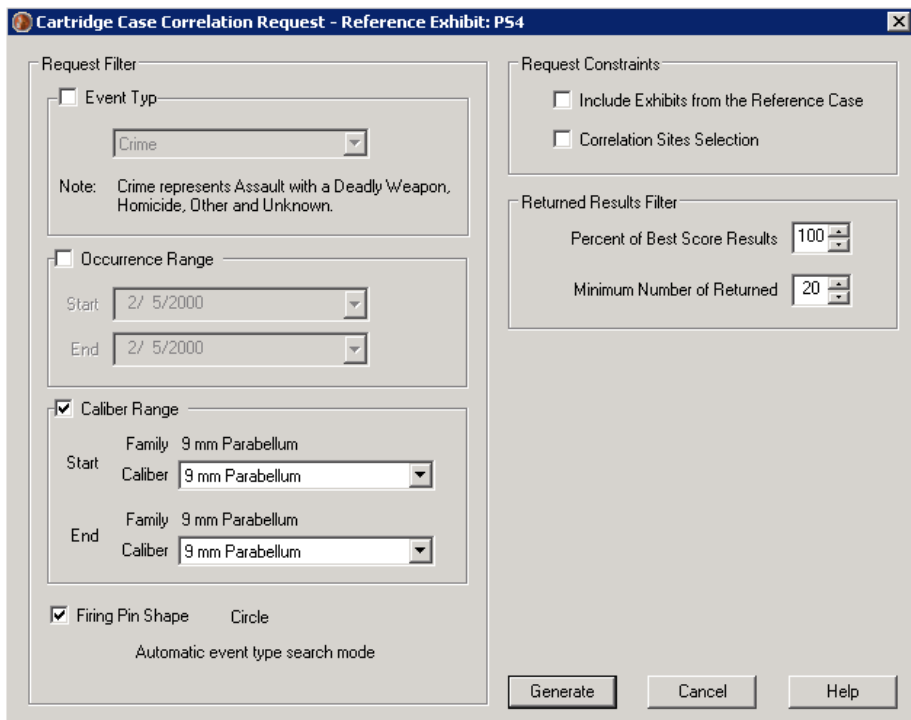
1. In the IBIS® MATCHPOINT+™ Navigation tree, locate the IBIS® case and the exhibit that you want to use as the reference exhibit for your correlation request.



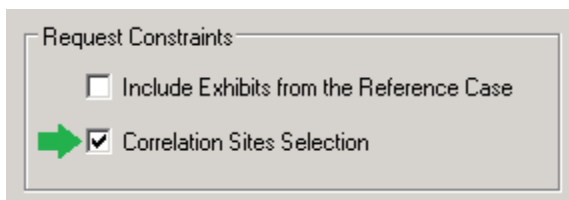
2. Right-click the reference exhibit and then select **Manual Correlation Request**.



The Correlation Request dialogue box appears and displays the default settings. They are equivalent to those used for an automatic correlation request.

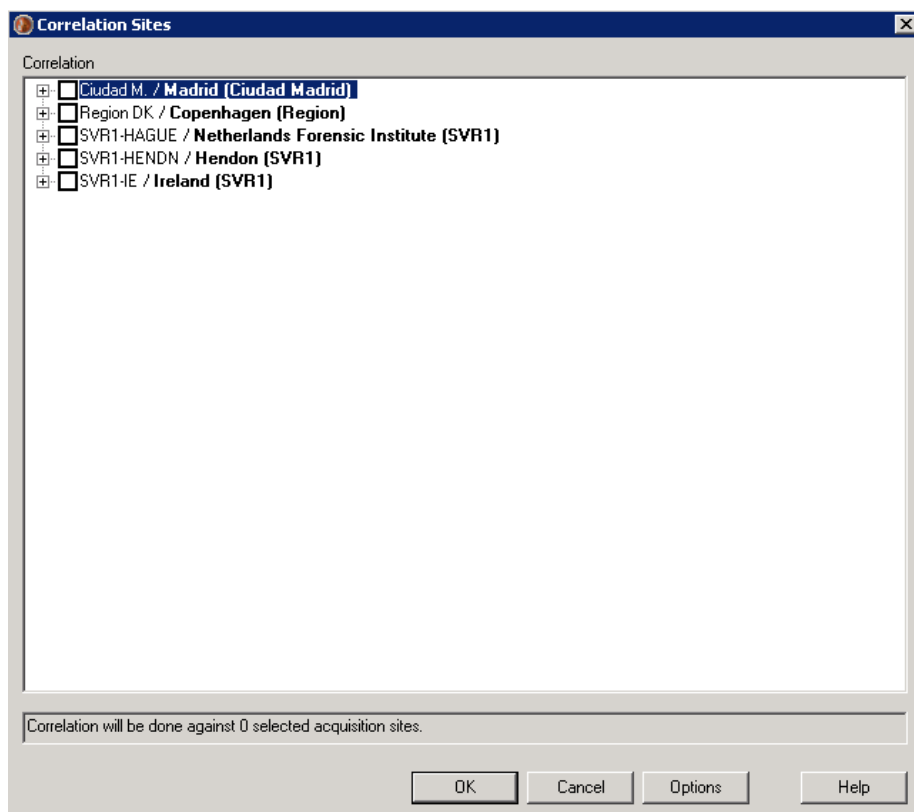


3. If required, modify one or more of the settings for this particular search, such as the **Occurrence Range** or **Caliber Range**.
4. Check the **Correlation Sites Selection** box in the upper right corner.

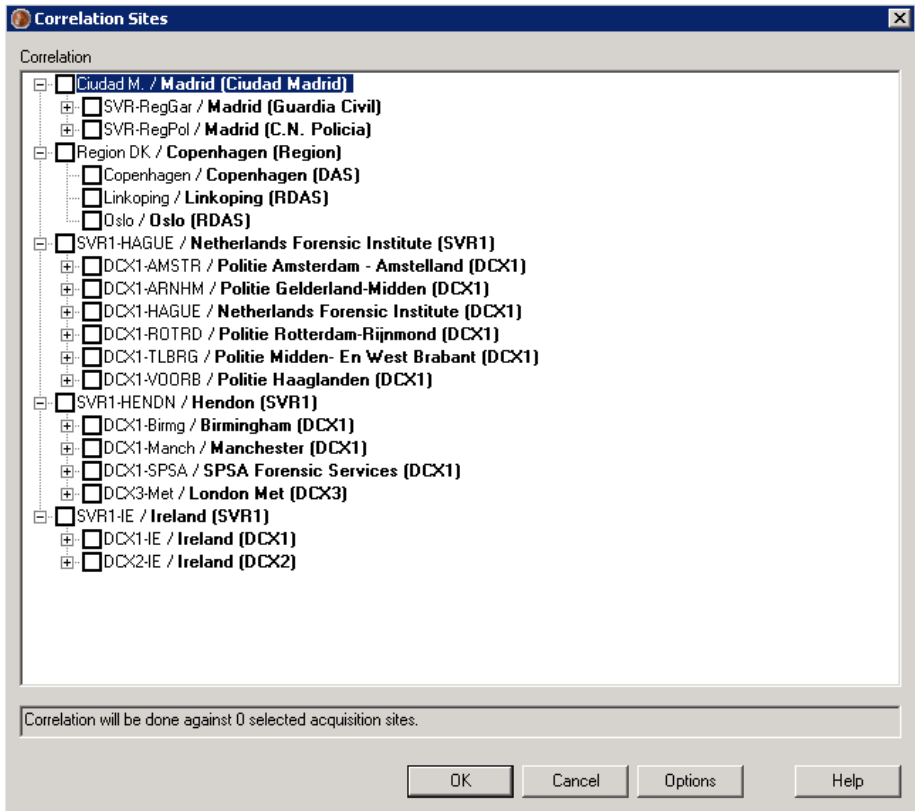


5. Click **Generate**.

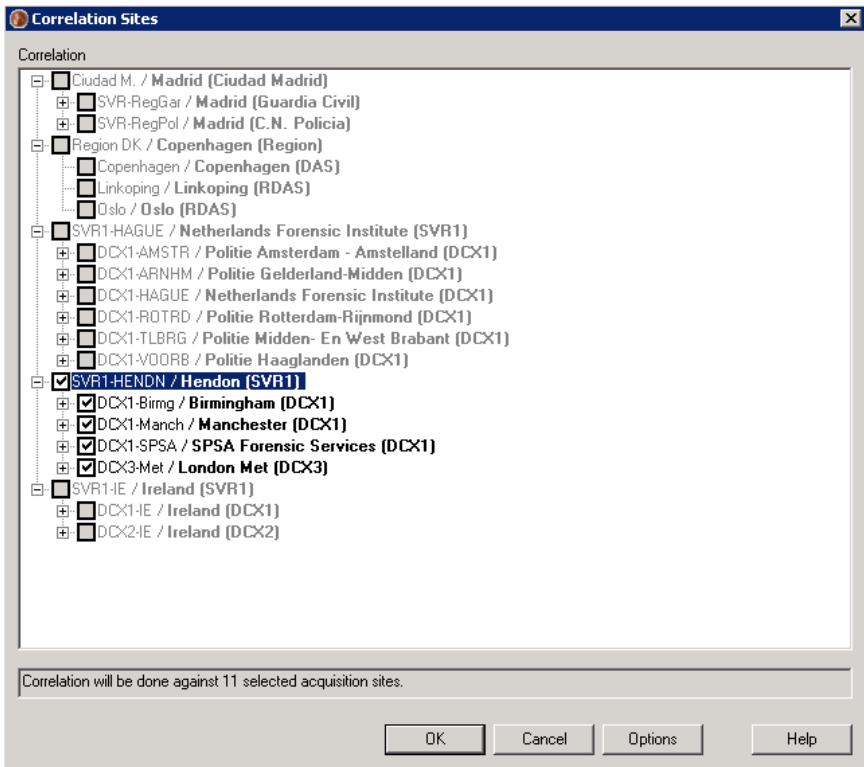
The Correlation Sites dialogue box appears and lists all participating IBIN agencies.



6. If required, click the plus sign (+) next to an agency to see the sites for each agency.



Note that only one agency can be selected per correlation request.



For example, selecting the Hendon agency's IBIN Correlation Server from the Correlation Sites list causes all other servers to be inaccessible. If you wish to search against the data of multiple agencies or countries, then an individual manual correlation request will need to be launched for each foreign agency that you wish to search against.

7. Click **OK** to launch the IBIN correlation request.

The new request for the reference exhibit appears in the Correlation Requests view of the Correlations window. Once the correlation is completed, the results can be reviewed at your convenience in the usual manner.

### **Notification when the network is offline**

A **protocol for notification** has been established **for when the IBIN network is offline and when connectivity has been re-established**. **Regular updates** of the situation can be supplied by contacting the Support services at Forensic Technology.



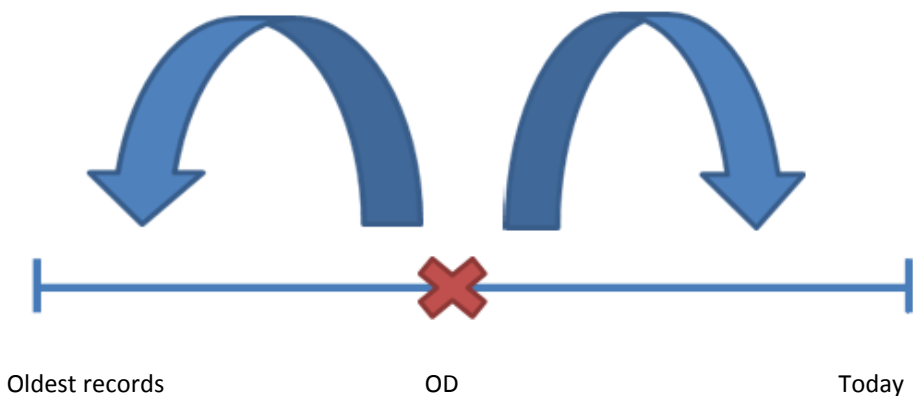
# BEST PRACTICE FOR CASES WITH AN UNKNOWN OCCURRENCE DATE

## Background:

The occurrence date (OD) used when a case is entered into an IBIS® TRAX-3D system plays an important role in how the correlation process searches against bullet and cartridge case exhibits within the IBIN database. This applies to the OD of both the **reference** case/exhibit, which is initiating the correlation request, and the **test** cases/exhibits, which are being searched against.

The date that the OD represents will vary depending on the type of event concerned.

1. **Where the firearm is still at large** - for example, for many crime-type events - the OD should represent **the date on which the crime took place**. When a crime-type exhibit is the reference for a correlation, because the firearm is still in circulation, the search within the database will cover ODs that are **both BEFORE and AFTER** the reference exhibit's own date.





Use the following process to set the OD to the default date when the actual OD cannot be determined.

1. In the **IBIS® BRASSTRAX-3D™** or **IBIS® BULLETRAX-3D™** Add Case dialogue box, enter the appropriate information and check the box in the **Occurrence Date** field.

**Add Case**

Case Number \*  
2011-019844

Occurrence Date \*  
 9/13/2011

Event Type \*  
Homicide

Case Supervisor

Law Agency Name \*  
Forensic Technology - Montréal

Law Agency Case Reference Number

High Profile

Restricted Status

Comments

\* indicates a mandatory field.

OK  
Cancel  
Help

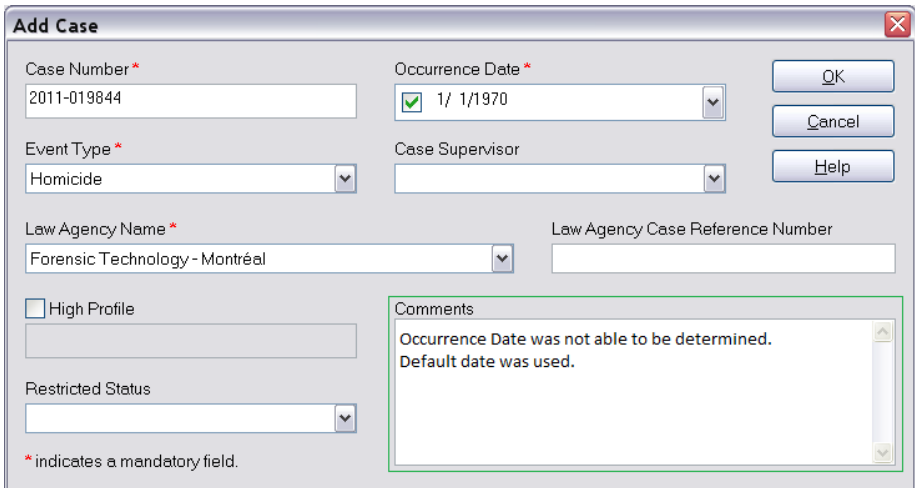
The current date will appear in the Occurrence Date field by default when the check box is selected.

2. Make sure that the Num Lock feature on your keyboard is on, click to left of the first number in the Occurrence Date field, and then press your keyboard number and arrow keys to enter the following sequence:



1 ⇨ 1 ⇨ 1970  
(January 1st, 1970)

3. In the Comments field, indicate that the OD was unknown.



The screenshot shows a software window titled "Add Case" with a close button (X) in the top right corner. The form contains several fields and buttons:

- Case Number \***: Text input field containing "2011-019844".
- Occurrence Date \***: Date picker dropdown menu showing "1/ 1/1970" with a checkmark icon.
- Event Type \***: Dropdown menu showing "Homicide".
- Case Supervisor**: Empty dropdown menu.
- Law Agency Name \***: Dropdown menu showing "Forensic Technology - Montréal".
- Law Agency Case Reference Number**: Empty text input field.
- High Profile**: Unchecked checkbox.
- Restricted Status**: Empty dropdown menu.
- Comments**: Text area containing the text: "Occurrence Date was not able to be determined. Default date was used."
- Buttons**: "OK", "Cancel", and "Help" buttons are located on the right side.
- Footnote**: "\* indicates a mandatory field." is located at the bottom left.

The data sanitization process will mask these comments as they are uploaded to the IBIN Correlation Server, however they will still be of use within your own agency.

The search within the database will start from the **very first day** that the IBIS system started **working, up to and including today's date**.



# VALIDATED PROCESS FOR CREATING DOUBLE CASTS

## Introduction

The following best practice represents an amalgamation of several of the most common double-casting procedures in use today and has been tested for use with the IBIS technology.

Castings of evidence (fired bullets and cartridge cases) from one crime can be sent to other jurisdictions or countries in lieu of original evidence for comparison and linkage to other crimes where similar evidence exists, thereby preserving the chain of custody of the original evidence and enabling forensic laboratories to provide valuable investigative leads to police. The best practice provided in this document has been developed to enhance the consistency and quality of ballistics casts for use in IBIN.

Casting will play an important role in IBIN. Double-casting, also known as ballistics cloning, is a process whereby microscopic-quality replicas are made from ballistics evidence. IBIN member countries can send casts of ballistics evidence to other participating countries for comparison, peer review, and quality control testing. Non-IBIN member countries that do not have automated ballistics identification systems, or that have technology other than IBIS, can participate in IBIN using the double-casting method.

## Background

Double-casting can be used to reproduce fired bullets, and cartridge cases that have a microscopic identifiable level and quality.



*Real Specimens*



*Replica Specimens*

Historically, firearm examiners experimented with various casting materials, methods, and techniques with varying degrees of success. The development of room-temperature vulcanizing (RTV) silicones has provided the optimum solution for the replication of fired bullets and cartridge cases and the microscopic markings left on them during the firing processes. The Netherlands Forensic Science

Laboratory (currently the Netherlands Forensic Institute) and Bundeskriminalamt (BKA—Germany) pioneered double-casting in its current form.\* The European Network of Forensic Science Institutes (ENFSI) uses a similar process to create consistent proficiency tests for its members.

\*AFTE Journal, Volume 39 Number 4, Fall 2007, “Castings of Complex Stereometric Samples for Proficiency Tests in Firearm and Tool Mark Examinations” by Alfons Koch and Horst Katterwe, *Bundeskriminalamt*.

### **Double-Casting Process**

The casting process is a two-step process that first requires making a silicone mould of the fired bullet or cartridge case and then making a resin cast using the created mould.

Prior to starting the double-casting process, follow your standard laboratory procedures concerning:

- DNA, latent fingerprints, trace evidence examinations for ballistics evidence and test-fired ammunition components;
- marking of ballistics evidence and test-fired ammunition components;
- cleaning of the ballistics evidence to prepare it for the double-casting process;
- photographing of the ballistics evidence.

All measures should be taken to preserve the evidentiary value of fired bullets and cartridge cases prior to starting the double-casting process.

## **Casting techniques**

### **Fired bullet and cartridge case preparation**

Tools needed: Needle-nose or smooth-jaw pliers (to bend back sharp petals on damaged bullets)  
Scissors (mounting)  
Glue gun and glue (mould box)

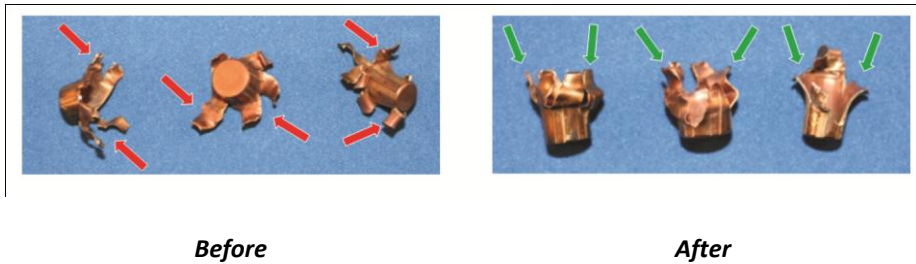
Materials needed: Cotton swabs (cleaning)  
Small corks, wooden dowels, sticky wax, modelling clay (mounting)  
Wooden base, plastic base or drinking cup base (mounting)  
Plastic box, drinking cup, or PVC box of a suitable size (mould box)

Products needed: Acetone, methanol, rubbing alcohol, or cleaning agents specified by your laboratory procedures (cleaning)  
Super Glue or equivalent (cyanoacrylate) and Super Glue accelerator (Zip-Kicker spray) (mounting)

## Cleaning

In accordance with your laboratory procedures, thoroughly remove trace material including dirt, foreign objects/materials, body fluids and contaminants, using cotton swabs dipped in acetone, methanol, rubbing alcohol or the cleaning agents specified by your laboratory.

Sharp petals on damaged/expanded bullets should be bent away from the bullet's base using the needle-nose pliers or smooth-jaw pliers (or removed since they can permanently damage the mould). The part of the petal that normally needs to be bent forward is towards the nose of the bullet and does not usually bear any critical identification marks. Be careful that you do not add extra marks as you bend back the petals (if smooth-jaw pliers are not available, covering the tips of needle nose pliers with plastic heat-shrink tubing will help prevent introducing new marks to the exhibit.)



## Bullet Mounting

For pristine bullets:

- Select a wooden dowel that is approximately 10 mm in length and has a diameter that is slightly smaller than the bullet diameter.
- Using Super Glue (or equivalent) and the accelerator, mount the bullet on the wooden dowel using sticky wax or modelling clay.





- Mount the dowel with the bullet so that it is perpendicular to the plastic base.



For damaged/deformed bullets:

- Select a suitable-sized wooden dowel and fill all cavities and other large openings with modelling clay, if necessary.
- Mount the fragment with the microscopic marking face up to the plastic base.



## Cartridge Case Mounting

- Push a small cork stopper about halfway into the cartridge case mouth.



- Using Super Glue (or equivalent), mount the bottom of the cork stopper so that it is perpendicular to the plastic base.
- Several fired bullets and cartridge cases can be mounted onto the same mould box.



## Mould Box

Cut out the bottom of a clear-plastic drinking cup. Place the cup over the mounted evidence: in our example, a bullet and a cartridge case.

Secure the cup to the plastic base by applying glue along the cup's circumference using the glue gun to prevent the RTV silicone from leaking. Alternatively, you can use a plastic box with an open top.



## Creating the Mould

Time: 15-24 hours (curing)

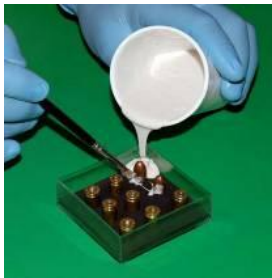
Tools needed: Spatula (mixing)  
Container (plastic cup suggested, to prepare the mixture)  
Paintbrush (to help pour the mixture)  
Mould key knife (demoulding and mould scribing)  
Knife (removing mould from its PVC box)  
A can of compressed air

Materials needed: Pressure pot (mould curing)  
Air compressor, with nozzle (mould curing)

Products needed: Silicone, Elastosil M4641 A and Elastosil M4641 B – [www.wacker.com](http://www.wacker.com)  
Rubbing alcohol (removing the mould from its PVC box).

Shake the silicone containers well or stir their contents; the components separate when left sitting for some time. For one cup, by weight, the ratio of Elastosil M4641 A to Elastosil M4641 B must be 10:1. Mix the Elastosil M4641 A and Elastosil M4641 B thoroughly with a spatula.

Pour the mixture into the previously prepared mould box until it is about 3-4 mm above the highest bullet nose or cartridge case. To prevent air bubbles, pour slowly and use a paintbrush to help place the mixture into the bottom of the mould. Move the mould from side to side intermittently; the movements will help remove the bubbles.



Place the mould box into the pressure pot.



Close the pressure pot and connect it to the air compressor. Turn on the air compressor and apply 30 psi of air pressure to the pressure pot.



Cure the mould for 15-24 hours under pressure at room temperature. Check the exact time specified by the silicone manufacturer; it can take up to 24 hours. Curing the mould box containing the mixed silicone under pressure ensures high-quality bubble-free moulds. The air pressure will force out the air bubbles generated during the mixing and pouring of the silicone.



## Demoulding Process

### 1. Remove the mould from its mould box

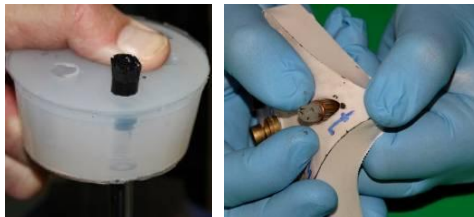
When the curing process is finished, turn off the air compressor, disconnect the air-pressure hose from the pressure pot, and remove the cured RTV silicone mould from the pressure pot. Remove the plastic cup and the plastic base from the mould. To aid its release, you can move the head of a knife around the outside of the mould, and adding rubbing alcohol will make the silicone slippery (alternatively, applying a silicone release agent inside the mould box before pouring the silicone rubber will aid its release).



### 2. Remove the real specimens from their silicone mould

Remove the original specimens carefully from the mould. Remove the dowel (attached to the bullet) or the cork stopper (pushed into the cartridge case mouth), push the bottom of the mould onto a flat-tipped rod of approximately the same diameter as the bullet or the head of the cartridge case, and flex the silicone mould.

The base of the mould must be marked with the corresponding evidence reference numbers for identification as each exhibit is removed. Acceptable methods of marking include inscribing directly into the mould, placing a label into the mould if you use transparent mould-making material, or placing a label on the outside of the mould.



**Take care not to damage the mould and the bullet/cartridge case.**

A mould key knife can be used to remove the fired bullet/cartridge case.

After the bullet and the cartridge case have been removed from the mould, clean the mould by blowing compressed air into it to remove any loose silicone particles.



The mould is now ready for resin casting.

## **Casting Resin**

Time: 2 hours (curing)

Tools needed: Paintbrush (to help pour the mixture)  
Needle-nose pliers (demoulding resin casts from silicone mould)  
Screw (demoulding resin casts from silicone mould)  
Drill (demoulding resin casts from silicone mould)

Materials needed: 2 mixing cups  
A stir stick  
A can of compressed air  
Light soap solution

Optional: Drill  
Drill bit  
Screw(s)  
Needle-nose pliers  
Small razor saw  
Small lathe

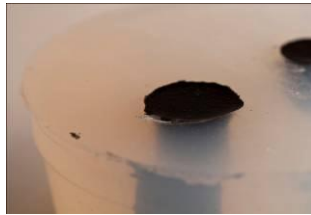
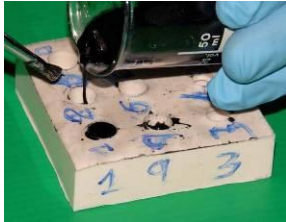
Products needed: Urethane Resin, Smooth-Cast 321 A and Smooth-Cast 321 B – [www.smooth-on.com](http://www.smooth-on.com)  
Smooth-On SO-Strong Black Color Tint – [www.smooth-on.com](http://www.smooth-on.com)



### Filling the silicone mould with casting resin

Ensure that the moulds are clean and free of dust or other materials. Clean the mould using compressed air. Have two disposable mixing cups ready. Pour a quantity of Smooth-Cast 321 A into one cup and an equal quantity of Smooth-Cast 321 B into the second cup. Add 30 drops of Smooth-On SO-Strong Black Color Tint (for about a 100 ml volume) into the cup with the Smooth-Cast 321 B resin. Mix the A and B parts thoroughly for about 40 seconds using the stir stick. This mixture will begin curing in about 7 minutes, so it is important to act promptly.

Pour the mixture slowly into the mould until it is level with the mould opening. To help prevent air bubbles, you can use a paintbrush to apply the resin in the base of the mould. It is important to do this in the zone of the groove (knurling or rim).



Place the resin-filled mould into the pressure pot and close the lid. Connect the air compressor to the pressure pot. Turn on the air compressor and apply 30 psi of air pressure to the pressure pot. Allow for the resin to cure for about 2 hours in the pressurized pressure pot. Check the exact time required by the resin manufacturer.



## Demoulding cured resin casts

When the curing process is finished, turn off the air compressor, disconnect the air pressure hose from the pressure pot, and remove the cured RTV silicone mould containing the cured resin castings from the pressure pot.

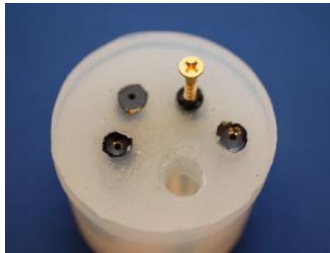
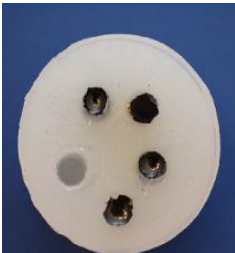
Remove the cured resin casts from the mould by pushing the bottom of the mould onto a flat tipped rod and simultaneously pulling the cured casting upward with your fingers and/or flexing the silicone mould.



Other methods of demoulding include:

Using needle-nose pliers to grip the base portion (formed by the wooden dowel/cork stopper) and prying the cast free (the longer work areas eliminate the risk of damaging the cured resin castings).

Drilling a small hole in the exposed part of the resin casting (in its mould) and inserting a small screw into the casting. The casting is then removed from the mould by gently pulling the screw out (with the cured resin casting attached) using pliers.



**Take care not to damage the mould and the bullet/cartridge case.** The base portions of the cured resin bullet and cartridge case castings can be removed with a small razor saw or can be cut off on a small lathe taking care not to damage the cured resin bullet and cartridge-case castings.

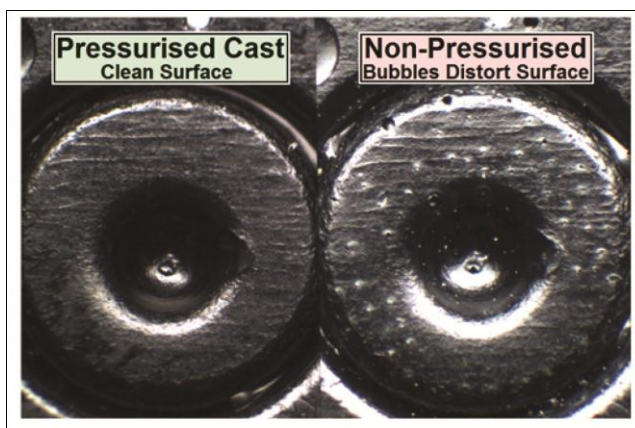
Clean the trimmed resin bullets and cartridge cases with compressed air or with water and a light soap solution.



The resin bullet and cartridge-case castings are now ready for ballistics imaging or microscope examination and comparison.

## Notes and recommendations

- One mould can cast up to 20 replicas.
- For moulds and casts, a pressurized curing process and black-dye resin are recommended for all ballistics evidence and test-fired ammunition components to be included in IBIN.
- Pressurized curing will remove any air bubbles from the silicone and resin.



- Brown-dye resin or a gold or copper coating (that would not require any dye at all) are available but are not the best and are not recommended for IBIN. The choice of resin colour depends on the application used. Dark brown is suitable for comparison microscope examination, but not for IBIS BRASSTRAX-3D imaging.

Black is suitable for all applications (comparison microscope examination and BULLETRAX-3D and BRASSTRAX-3D imaging).

- To optimize the use of moulds and resin copies over time, and to prevent or impede shrinkage, storage should be maintained in an environment with a controlled, moderate temperature and humidity.
- It is recommended that laboratories acquire only small quantities of mould-making material and casting resin, as these materials have a limited shelf life.
- For the mould and casting materials, always check the manufacturer's instructions regarding the correct amounts to be used and the appropriate manner and curing times.

## **Materials known to deliver good results**

### Mould:

- Silastic 3483 and A. Curado – [www.feroca.com](http://www.feroca.com)
- T28 Silicone Rubber and T6 Catalyst – [www.tiranti.co.uk](http://www.tiranti.co.uk)

### Resins:

- Epofer EX 401 and Epofer E 432 Catalyst – [www.feroca.com](http://www.feroca.com)
- Epoxy Gloss Coat A and Epoxy Gloss Coat B – [www.vosschemie.de](http://www.vosschemie.de)

(Note: Epoxy resin curing times are significantly longer than for urethane resins)

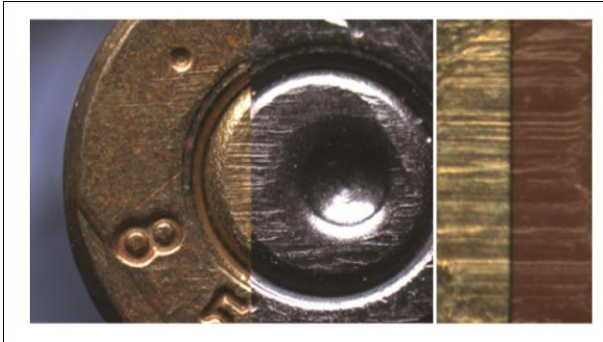
### Resin dye:

- PE 9005 (black) – [www.feroca.com](http://www.feroca.com) (for Epofer EX 401 and Epofer E 432 Catalyst)
- Polyurethane Pigment Black – [www.tiranti.co.uk](http://www.tiranti.co.uk) (for Epoxy Gloss Coat A and Epoxy Gloss Coat B)

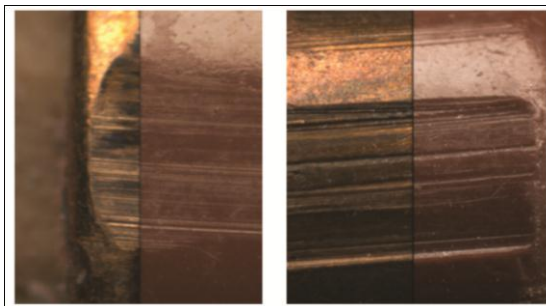
### Comparison microscope images

Best results when viewing the casts on the microscope are obtained by indirect light or by light diffusers.

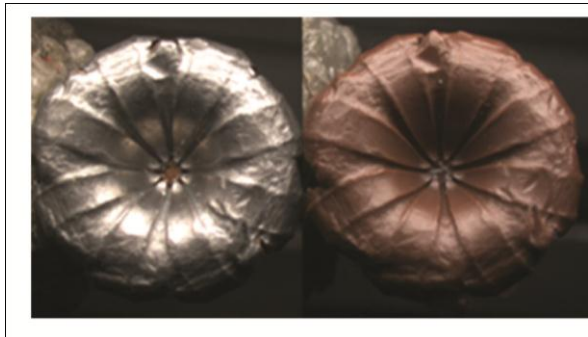
#### Real fired cartridge case to cast



#### Real fired cartridge case to cast



#### Real fired bullet to cast detail comparison

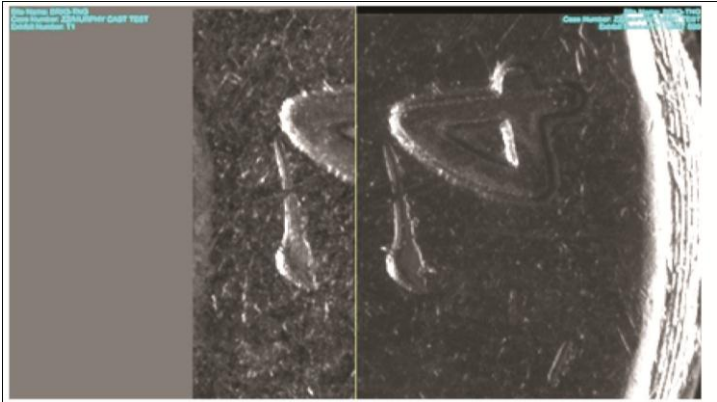


Comparison IBIS BRASSTRAX-3D Images

Real to cast



Real to cast

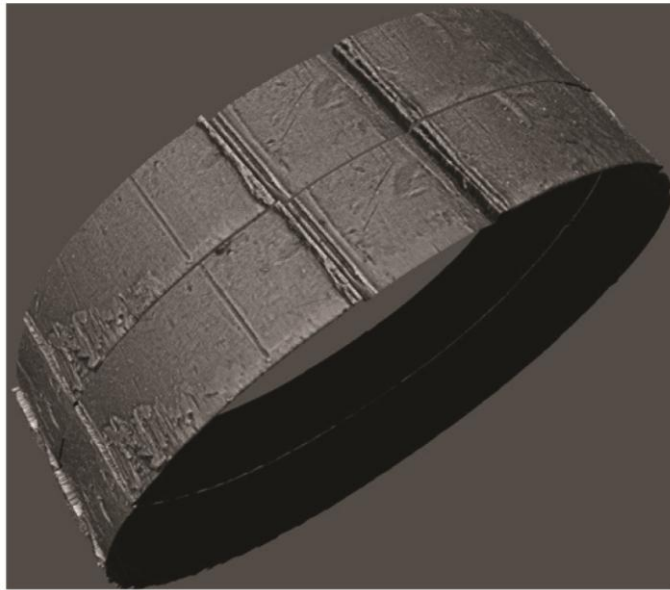


**Real to cast**



**IBIS® Comparison Microscope 3D (ICM-3D) Images**

**Real to cast**





## **Conclusion**

### **Certificate of Authenticity of evidence submitted (p. 82)**

All castings must be accompanied by a Certificate of Authenticity of evidence submitted, or a similar certificate compiled by the person conducting the double-casting process. The Certificate of Authenticity of evidence submitted certifies that the cast(s) was/were made from original evidence.

### **Validation process**

On 4 and 5 January 2011, a validation group of experts met at the Spanish National Police Central Forensic Science Laboratory to evaluate known processes for double-casting of ballistics evidence. This document was compiled by the validation group to provide best practices and guidelines for double-casting techniques for use in the INTERPOL Ballistics Information Network (IBIN).

### **Validation participants**

**Jose F. Dominguez Sanchez** (Inspector, Jefe de Grupo Operativo, Centro policial, Comisaria General De Policia Cientifica, Laboratorio Central Balistica Forense, Madrid, Spain) has 23 years' forensic ballistics experience and is the author of "Resin Casting of Ballistics Evidence".

**Gregg Taylor** (Firearms and Ballistics Expert, National Ballistics Intelligence Service (NABIS), United Kingdom) has 10 years' experience in the field of forensic evidence recovery and examination for West Midlands Police, including specialized work as an expert in firearms and ballistics for NABIS.

**Paul J. Murphy** (Senior Firearms Technical Advisor/Forensic Firearm Examiner at Forensic Technology WAI; former Senior Forensic Scientist, Virginia Division of Forensic Sciences Eastern Laboratory in Norfolk, Virginia, USA; former Commanding Officer/Senior Superintendent South African Police Service, Eastern Cape Forensic Science Laboratory, Port Elizabeth, South Africa) has 27 years' forensic ballistics experience. He is a Distinguished Member at the Association of Firearm and Tool Mark Examiners (AFTE) and is the author of "Forensic Ballistic Component Cloning (Evidence & Test-fired Ammunition Components)".



## CERTIFICATE OF AUTHENTICITY OF EVIDENCE SUBMITTED



We request the following evidence to be inserted into IBIN and correlated against:

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.....

.....

.....

We certify that the cast(s) was/were made from original evidence.

Date, place, NCB name

.....

# IBIN COMMUNICATION FLOW

Every INTERPOL member country is unique and the proper channels of communication within the country can therefore differ greatly from one government to the next. Establishing a standard communication flow can prove difficult. For this reason, the following communication outline should be taken as the standard for every IBIN user but still leave room for exception when necessary.

Of primary importance is the communication between the investigating officer and the ballistics expert. The investigating officer must be informed that international correlation against the IBIN participating countries is possible. The ballistics expert must have sufficient case-specific intelligence to recommend the use of IBIN.

When an IBIN user uploads ballistics data into the national IBIS system, a copy of the data is automatically sent to the IBIN server at the General Secretariat unless the reporting officer indicates otherwise. Copied data are not automatically correlated to the system. A ballistics expert must manually request a search in IBIN and indicate which countries and/or regions to correlate the data against. A ballistics expert only correlates against the entire database under rare circumstances, as doing so creates additional workload for the ballistics expert.

The flow of communication in IBIN requires close communication between forensic national laboratories, National Central Bureaus (NCBs) and the General Secretariat. When a “**Potential Hit**” results from a correlation, the communication flow should be initiated. Laboratories, the National Central Bureaus (NCBs) involved and INTERPOL should all communicate and be kept informed of any international coordination regarding the exchange of ballistics data.



## **ACKNOWLEDGMENTS**



# ACKNOWLEDGMENTS

INTERPOL gratefully acknowledges the contributions, dedication, and hard work of the INTERPOL Ballistics Information Network Steering Committee members, national laboratories, National Central Bureaus, Forensic Technology Inc. and INTERPOL General Secretariat staff.

Special thanks go to INTERPOL Secretary General Ronald K. Noble, and Forensic Technology President Robert A. Walsh, without whose support IBIN would not exist.

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INTERPOL

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