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**PREPARATORY COMMISSION FOR THE ESTABLISH-  
MENT OF THE INTERNATIONAL REGISTRY FOR MAC  
EQUIPMENT PURSUANT TO THE MAC PROTOCOL**

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**PROTOCOL TO THE CONVENTION ON INTERNATIONAL INTERESTS IN  
MOBILE EQUIPMENT ON MATTERS SPECIFIC TO MINING, AGRICULTURAL  
AND CONSTRUCTION EQUIPMENT**

**DRAFT REQUEST FOR PROPOSALS (RFP)  
FOR THE INTERNATIONAL REGISTRY FOR MAC EQUIPMENT**

(prepared by the UNIDROIT Secretariat)

**PRIVATE AND CONFIDENTIAL**

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Matters subject to formal revision are marked **yellow**  
Matters suggested for material revision are marked **blue**

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## PART 1 – INTRODUCTION

### A. Overview

1. This Request for Proposals (RFP) Document is issued by the Preparatory Commission for the establishment of the International Registry pursuant to the Protocol to the Convention on International Interests in Mobile Equipment on Matters specific to Mining, Agricultural and construction Equipment (the MAC Protocol).<sup>1</sup>
2. The purpose of this RFP is to invite interested entities to submit a request to participate in the solicitation for being awarded the contract as the Registrar of the International Registry for MAC Equipment (the International Registry). As part of their request to participate, the interested entities shall submit a preliminary offer in response to the regulatory, technical, financial requirements, and key contract provisions set out in this RFP. The preliminary offer will be evaluated against the criteria detailed in this RFP (further information in paragraphs 124 following).
3. The tenderer, whose preliminary offer is found to be substantially in conformity with the RFP requirements, and has achieved the highest score, will be chosen as the initially preferred bidder and invited for negotiations with the aim of achieving the best conformity with the overall requirements for operation of the International Registry. The Preparatory Commission may invite multiple bidders for simultaneous negotiations and the Preparatory Commission reserves the right to go back to the entity with the next highest score for negotiations, should the negotiations with the initially preferred bidder fail within the planned time period.
4. The function of the Registrar will include, *inter alia*, being responsible for the design, production, delivery, installation, and ongoing operation and development of the International Registry.
5. The relationship between the Registrar and the Supervisory Authority (the relationship between the Supervisory Authority and the Registrar is detailed in Annex I of this document) shall be governed by a contract setting out their mutual rights and duties. The essential elements of the contract are provided in Part 4 with further details being subject to negotiations.
6. The International Registry will be an electronic and internet-based registry. It will be accessible via a dedicated website, and all transactions, including registrations and searches, will be undertaken electronically through that website. Some direct human intervention may be required in relation to the process of verifying the identity of applicants wishing to become registered users of the International Registry. Registrations and searches will otherwise be conducted automatically without any real-time human intervention on the part of the Registrar.
7. The Registrar of the International Registry will play a key role in the development, administration and ongoing development of the International Registry which, following the successful establishment of the International Registry for Aircraft Objects, has the potential to play an important role in financing transactions relating to mining, agricultural and construction equipment.
8. In relation to the registration and search services provided under the MAC Protocol, the Supervisory Authority, in close consultation with the Registrar, will establish (and periodically review, as appropriate) the fees having regard to all relevant factors including assumptions as to Registry operating costs, transaction volumes, as well as reasonable costs of the Depositary. The fees will be established so as to recover the reasonable establishment, implementation and operating costs of the International Registry over the period of the contract.

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<sup>1</sup> The text of the MAC Protocol (also referred to as 'Pretoria Protocol') is available at <https://www.unidroit.org/instruments/security-interests/mac-protocol-2019>

9. The Supervisory Authority will work closely with the Registrar in establishing a Registry implementation schedule linked to the progress being made on securing state ratifications; this approach should serve to keep down the Registrar's expenditures during the early stages of implementation. The Supervisory Authority will partner with the Registrar to promote the MAC Protocol to potential Contracting States with a view to maximising the pool of potential revenue-generating Registry transactions.

## **B. What we are looking for**

10. This RFP seeks requests to participate from interested entities to be appointed as the Registrar of the International Registry. The first appointment shall be for an initial period of 5 Years<sup>2</sup>. The Supervisory Authority may, in its absolute discretion, decide to reappoint the Registrar for a period or periods not exceeding 5 years each<sup>3</sup>, or may decide upon another process for the selection of the Registrar to operate the International Registry following the expiry of the initial 5 year period of the operations of the International Registry. The contract between the Supervisory Authority and the Registrar will provide for the Supervisory Authority to undertake consultations with the Registrar on this issue and to communicate to the Registrar its decision about reappointment of the Registrar no later than **24 months** prior to the expiration of the term of the contract.

11. The principal function of the Registrar shall be to ensure the establishment and efficient operation of the International Registry, in accordance with the Convention, the MAC Protocol, the regulations to be made by the Supervisory Authority (the Regulations),<sup>4</sup> and the contract to be concluded between Registrar and the Supervisory Authority<sup>5</sup>.

12. Requests to participate must be submitted no later than **DD Month 202Y** (see further paragraph 129).

13. Requests to participate shall include a preliminary offer to be evaluated by the Preparatory Commission having regard to the following factors (see further details on the solicitation process in paragraph 122 following):

- (a) the tenderer having sufficient relevant business and management experience to successfully establish and operate the International Registry;
- (b) the proposed corporate structure and ownership structure of the Registrar (including the tenderer's and the proposed Registrar's name, date and place of registration, capitalisation and beneficial ownership and control);
- (c) the extent to which the preliminary offer complies with the technical requirements of the International Registry, in particular the technical requirements set out in Part 2 of this RFP Document;
- (d) the preliminary offer's compliance with the key contract provisions in Part 4 of this RFP Document;
- (e) the cost elements in the preliminary offer (see Part 3 of this RFP).

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<sup>2</sup> This is consistent with Article XIV(5) of the MAC Protocol. The Request for Proposals for the International Registry for Railway Rolling Stock refers to a period of 10 years.

<sup>3</sup> This is consistent with Article XIV(5) of the MAC Protocol. The Request for Proposals for the International Registry for Railway Rolling Stock refers to a period of 10 years.

<sup>4</sup> Article 17(2)(d) of the Convention provides for the Supervisory Authority to make regulations dealing with the operation of the International Registry – these Regulations will provide the framework for the establishment and operation of the International Registry. The Regulations will be developed on an ongoing basis in the lead-up to the entry into force of the MAC Protocol. The current draft of the Regulations is attached to this RFP as **Annex 4**. It is expected that this current draft will be revised and modified during the establishment phase of the International Registry, including in consultation with the Registrar, and may be subsequently amended.

<sup>5</sup> Information about key contract provisions is provided in **Part 4** of this RFP.

14. Requests to participate may be made by public or private entities. It is envisaged that the Registrar may make arrangements with sub-contractors and service providers for the delivery of the services necessary to enable the Registrar to fulfil its obligations pursuant to the Convention, the MAC Protocol, the Regulations, and the contract between the Registrar and the Supervisory Authority. Any such proposed arrangements should be specified in the request to participate, and such arrangements will be subject to the approval of the Supervisory Authority.

15. Requests to participate must provide details as to the proposed corporate structure of the Registrar, however it is not necessary that a request to participate and preliminary offer be submitted by the same corporate entity that would act as Registrar, as long as that entity commits to be bound by the request and the offer.

16. The role of Registrar may provide the appointed entity with a unique platform to showcase the application of cutting-edge technology in relation to the international registration and recognition of financial instruments. The Registrar will be in a position to develop an attractive business model around the operation of the International Registry, which could become a key focal point for the mining, agricultural and construction industries. Through the International Registry website [Alongside managing the International Registry](#), the Registrar will have the potential to offer additional income-generating services ("ancillary services"), such as consultancy services, insofar as they do not impact the integrity of the International Registry. Any such additional services could only be provided with the prior consent of the Supervisory Authority. Further information is provided at paragraph 104 following.

17. Potential tenderers may wish to consider the International Registry established pursuant to the Aircraft Protocol as an illustration of a currently-operating registry established pursuant to the Cape Town Convention. Information about that International Registry may be available from the following internet site: <https://www.aviareto.aero/>

18. The Annexes to this RFP contain additional background information relevant to the International Registry (see Annex 1), as well as an overview of provisions of the Convention and the MAC Protocol that are relevant to the establishment of the International Registry (see Annex 2).

### **C. The role of the Supervisory Authority and the Preparatory Commission**

19. Article 17(1) of the Convention provides for the establishment of a Supervisory Authority as provided by the Protocol. Under Article XVII of the MAC Protocol, the Supervisory Authority shall be designated by a resolution of the Diplomatic Conference for the adoption of the MAC Protocol, provided that such Supervisory Authority is able and willing to act in such capacity. Resolution 2 of the Diplomatic Conference for the adoption of the MAC Protocol, thus, resolved to invite the governing bodies of the International Finance Corporation (IFC) to consider the matter of the IFC becoming Supervisory Authority of the International Registry and take the necessary action, as appropriate; and to inform the Secretary-General of the International Institute for the Unification of Private Law (UNIDROIT) accordingly.

20. The Convention provides in its Article 27(1) that the Supervisory Authority has international legal personality where not already possessing such personality. According to Article 17(2) of the Convention its functions include:

- establishing or providing for the establishment of the International Registry; and
- appointing and dismissing the Registrar.

21. The Diplomatic Conference for the adoption of the MAC Protocol resolved, in Resolution 1 of the Conference, to establish, pending the entry into force of the MAC Protocol, a Preparatory Commission to act with full authority as Provisional Supervisory Authority for the establishment of the International Registry, and directed it to carry out a number of tasks, including:

- with a view to guarantee the operability of the International Registry by the time of entry into force of the Protocol, to ensure that the Registrar managing the International Registry be selected in accordance with an objective, transparent and fair selection process, and that all necessary regulations and procedures be prepared and approved, with a target date of two years from the convening of the first meeting of the Preparatory Commission, which is to take place before six months have passed from the adoption of the Protocol;
- to work on other matters relating to the International Registry for mining, agricultural and construction equipment as may be required with a view to ensuring the establishment of the International Registry;
- to enter into a contract with the Registrar that makes provision for the development or testing of the software, the initial fees, the user application process and timelines, as well as other relevant details; and
- to ensure the necessary liaison and co-ordination with private industry which will be users of the International Registry.

22. This RFP Document has been issued by the Preparatory Commission, in its capacity as Provisional Supervisory Authority, to provide for the establishment of the International Registry.

23. Unless the context indicates otherwise, a reference in this RFP to the "Preparatory Commission" is a reference to the Preparatory Commission acting in its capacity as Provisional Supervisory Authority. The preparatory phase prior to the entry into force of the MAC Protocol will follow the model of the preparatory process undertaken in relation to the Aircraft Protocol, in which the Preparatory Commission established by the Cape Town Convention Diplomatic Conference undertook the preparations for the establishment of the International Registry for aircraft objects, with the Supervisory Authority adopting the decisions of the Preparatory Commission upon the entry into force of the Aircraft Protocol.

#### **D. Promotion and industry support**

24. UNIDROIT is committed to promote ratification and accession to the MAC Protocol through its role as Depositary to the Convention and MAC Protocol. The MAC Working Group, which comprises of manufacturers, financiers, legal firms and representative associations working in the mining, agricultural and construction sectors also plays an important part in promoting the MAC Protocol and ensuring its support from relevant stakeholders.

25. The Registrar, as the public face of the MAC Protocol, will be in a unique position to assist in the promotion of the MAC Protocol and the Registry. The cost provisions (see paragraph 98 following) provide for expenditure of [~~€xx,xxx~~25,000<sup>6</sup>] per year towards promotion activities (for example, attendance of seminars and meetings).

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<sup>6</sup> The Request for Proposals for the International Registry for Railway Rolling Stock refers to expenditure of €25.000 per year towards promotion activities.

## PART 2 – TECHNICAL REQUIREMENTS

### A. General technical requirements

#### 1. General overview

26. Requests to participate must address the tenderer's capacity to establish and operate the International Registry in light of the technical requirements set out in this section. The information provided in the request to participate must be sufficiently detailed to enable a thorough evaluation of that capacity.

27. In relation to the technical requirements, the request to participate must be specific, detailed and complete and must clearly and fully demonstrate that the tenderer has a thorough understanding of the requirements for, and the technical problems inherent in, providing services of the character, scope and magnitude outlined in the RFP. The request to participate must include, *inter alia*, details of the providers of software, software services, and other support services.

28. It is anticipated that the International Registry needs to have the technical capacity for XX<sup>7</sup> individual registration transactions<sup>8</sup> each year, and also provide for searches against MAC assets and the issuance of search certificates in relation thereto. The International Registry must provide the capacity for multiple registrations and searches to occur simultaneously. The International Registry must provide the potential for numerous individual assets to be identified in a single registration and for multiple changes to be effected through a single registration registered, and searched for, ("block registrations")<sup>9</sup>, further details of which are set out in the draft Regulations.

#### 2. An electronic, internet-based registry

29. The International Registry will be established as an electronic, internet-based registry. It will be accessible via a dedicated website, and all transactions, including registrations and searches, may be undertaken electronically through that website – it will not operate a physical "shop-front" and it will not be possible to physically visit the registry for the purpose of effecting registry transactions. Apart from the process for authorising registered users (see paragraphs 28-29), all registry transactions and services will be automated and able to be provided without direct real-time human intervention on the part of the Registrar.<sup>10</sup>

30. The International Registry's website will comprise the single point of entry for accessing the International Registry. The domain for the website shall be owned by the Supervisory Authority and used by the International Registry under a licence for the period of the Registrar's contract. The website of the International Registry must have a responsive design capable of supporting various screen resolutions and devices. The website shall also be compatible with the most popular internet browsers such as Google Chrome, Microsoft Edge, Internet Explorer 11, Mozilla Firefox, Opera, and Safari in order to be accessible to the widest number of users. The website must be configured so that it is able to be accessed from web browsers released within the previous 2 years.

31. The International Registry will capture information in standardised electronic forms for all registration, search and certification procedures.

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<sup>7</sup> The information will be required for the capacity assessment.

<sup>8</sup> The term "registration transaction refers" to the registration of: international interests, sales, assignments, and public service notices.

<sup>9</sup> This section may have to be deleted depending on "block registration" being covered under the final Regulation.

<sup>10</sup> The Registrar may have to effectuate registrations pursuant to a Court order.

### 3. Process for the authorisation of registered users

32. A person or entity will not have access to the International Registry in order to effect registrations (or participate in a registration transaction, such as by consenting to the registration) unless they have first been authorised by the Registrar as a registered user. That approval will be given after the Registrar has verified that the relevant applicant is who it claims to be and, in the case of an administrator representing another entity, that the administrator is entitled to act in that capacity. It will also be necessary to fulfil any other conditions for registration, such as the payment in advance of applicable fees. The International Registry will be required to incorporate secure log-on and access features which present the best solution having regard to cost, security, and portability (that is, the possibility of a single registered user being able to log into the International Registry from various locations).

33. Further details of the authorisation of registered users can be found in [draft Regulations for the MAC Registry at Part XX](#).

34. The International Registry will be able to be accessed by:

- all registered users;
- a designated entry point or entry points through which there shall or may be transmitted to the International Registry information required for registration, which may at any time be established by a Contracting State in its territory; and
- all other persons, to the extent that the Regulations provide for access to the International Registry without the need to become a registered user (some information on the International Registry will be accessible and searchable by users who are not registered users).

### 4. Minimised risk of unauthorised registrations

35. The process of registering an international interest will be fully automated and the Registrar will not be involved in reviewing the validity or accuracy of registration information prior to becoming searchable. However, the system will need to be designed so as to:

- minimise the risks of unauthorised registrations; and
- preventing registrations which do not contain the information required to effect a registration.

### 5. Registration process: minimal information to be required

36. The International Registry registration process will need to be designed to enable a minimum of information to be entered in order for interests to be registered and searched for, as interests will be indexed in the International Registry in relation to an identifier of MAC equipment, rather than the identity of the parties or other criteria.

37. The registration of an international interest on the International Registry will contain only minimal information, including the electronic signature of the registering person, the name of each of the named parties, and information identifying the MAC asset (see paragraph 33 following).<sup>11</sup> Annex 3 includes an illustrative model of a possible registration form, showing the items that might be included in it. Drop-down lists containing all options for insertion will be used as far as possible,

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<sup>11</sup> In order to take account of the possibility of registration of pre-existing rights or interests pursuant to Article 60 of the Convention, the International Registry will need to provide for the possibility that the date of creation of the international interest to be as early as 1960.

in order to minimise errors on the part of users when they enter information. However, the registration process shall provide for the possibility of the entry of free-form text, as specified under the Regulations.

#### **6. Basis for registrations – unique identification criteria**

38. Pursuant to Article 18(1)(a) of the Convention, which provides that the Protocol and Regulations must specify, *inter alia*, the criteria for the identification of an object, Article XVII of the MAC Protocol provides the criteria to identify the MAC assets for the purpose of registration. This denotes that:

*'A description of equipment that contains its manufacturer's serial number and such additional information as required to ensure uniqueness is necessary and sufficient to identify the object for the purposes of Article 18(1)(a) of the Convention. The Regulations shall specify the format of the manufacturer's serial number and provide what additional information is required to ensure uniqueness.'*

39. As provided by Section 5.1(c) of the Regulations, the following information identifying the MAC equipment must be provided:

- (i) [the serial number assigned to it by the manufacturer in the following format []];
- (ii) the brand name for the equipment; if unavailable, the name of the manufacturer;
- (iii) the manufacturer's generic model designation and descriptive name for the equipment; and
- (iv) such other descriptive information about the equipment as is required to ensure uniqueness of the equipment;]

#### **7. Registration of an international interest, prospective international interest, or a notice of national interest**

40. In addition to the unique identification criteria, the following information is required under Section 5.3*bis* of the Regulations concerning registration of an international interest, prospective international interest, notice of national interest, registrable non-consensual interest or creditor's notice:

- The [electronic signature] of the registering person;
- The name, physical address, phone number, and email address of each of the named parties;
- The lapse date of the registration, if the registration is to lapse prior to the filing of a discharge;
- In the case of an international interest or a prospective international interest, the consent of the named parties, given under an authorisation;
- The electronic addresses of the persons to which the International Registry is required to send information notices pursuant to Section 6 of the Regulations;
- If the named parties include more than one creditor, the name of the creditor who is to hold the sole right to consent to the discharge of that registration.

#### **8. Registration of an R-NCRI**

41. The following information is required under Section 5.2 of the Regulations concerning the registrations of an R-NCRI:

- (a) the information referred to in Sections 5.1(a), (b), (c), (d), (f) and (g), including, in the case of Section 5.1(f), the electronic address of the primary obligor with respect to the obligation that is secured by the R-NCRI;

- (b) the name of the Contracting State under whose laws the R-NCRI has been conferred;
- (c) the category of registrable non-consensual right or interest, as listed in the declaration of the Contracting State specified in Section 5.2(b), within which the R-NCRI being registered falls;
- (d) the certification of the party named in the registration as the holder of the RNCRI to which the registration relates, that (i) the R-NCRI has been validly conferred under the laws of the Contracting State specified in Section 5.2(b), and (ii) all of the registration information being provided to effect the registration is accurate and complete;
- (e) documentary evidence pertaining to the R-NCRI, in electronic format; and
- (f) the agreement of the party named in the registration as the holder of that RNCRI that by effecting such registration it submits itself to the jurisdiction of the courts of the place in which the Registrar has its centre of administration in relation to legal action under Article 44 of the Convention with regard to the registration, and that it shall be liable to the Registrar for all costs incurred by the Registrar arising out of the legal action unless the validity of the registration is upheld.

The registering person of a registrable non-consensual right or interest registration must either hold, or be the administrator that is entitled to issue, an R-NCRI authorisation.

#### 9. **Registration of a notice of sale**

42. In addition to the unique identification criteria, the following information is required under Section 5.3 of the Regulations concerning registration of a notice of a sale:

- (a) the information referred to in Sections 5.1(a), (b), (c) and (f); and;
- (b) the consent of the named parties, given under an authorisation;

#### 10. **Registration of an assignment**

43. In addition to the unique identification criteria the following information is required under Section 5.4 of the Regulations concerning registration of an assignment:

- (a) the information referred to in Sections 5.1(a), (b), (c), (f) and (g);
- (b) the consent of the named parties, given under an authorisation; and
- (c) if the interest being assigned is a registered interest:
  - (i) the file number of the registration relating to that interest (in the case of the initial assignment); or
  - (ii) the file number of the registered assignment by which the assignor acquired its rights in that registered interest (in the case of all subsequent assignments); and
- (d) if the interest being assigned is not a registered interest:
  - (i) a description of the interest assigned and the original debtor thereunder, using the format prescribed by the Procedures (in the case of the initial assignment of an unregistered interest); or
  - (ii) the file number of the registered assignment by which the assignor acquired its rights in that registered interest (in the case of all subsequent assignments).

#### 11. **Registration of a block assignment**

44. As provided by Section 5.5 of the Regulations, the International Registry may provide a facility permitting the registration of all assignments included in a "block assignment registration request". A "block assignment registration request" shall include:

- (a) an electronic certification by the assignor that all of the underlying interests evidenced by registrations on the International Registry in which it is a named party have been assigned to the assignee; and
- (b) a consent thereto given by the assignee,

each given under an authorisation.

#### 12. **Additional functions – Contracting State information**

45. The International Registry will also contain information about Contracting States to the Cape Town Convention and the MAC Protocol including, in particular, information about the instruments of ratification/accession of Contracting States and the declarations made by Contracting States, with this information to be added, and searchable, according to each particular Contracting State.

#### 13. **Round the clock, accurate recording of time of registration activities**

46. The International Registry will be central to one of the most important aspects of the Convention: establishing the order of priority for international interests in MAC objects. Pursuant to Article 29(1) of the Convention, an international interest that is validly registered on the International Registry has priority over any other interest subsequently registered, and over an unregistered interest (an interest that is not registered on the International Registry is an unregistered interest, irrespective of whether it is registered under a national registration regime). This “first-in-time” priority rule refers to the time when an interest first becomes searchable in the International Registry. Moreover, the International Registry will have users located in all parts of the world. Therefore, it is critical to the proper functioning of the system envisaged by the Convention and MAC Protocol that the International Registry is able to provide registration and search services around-the-clock.

47. In accordance with Article 18(4) of the Convention, the Registrar must ensure that registrations are entered into the International Registry database and made searchable in chronological order of receipt. Precise timing information must be recorded and must be contained in all registrations and searches.

48. The timing at which information is entered into the International Registry, and made available to those who conduct searches, is critical to the Convention’s system of priorities. The International Registry will be required to electronically issue search certificates which show the MAC asset (identified by its unique identification criteria) and the full history (including time and date) of all registrations, and amendments and discharges of registrations, with respect to that MAC asset.

#### 14. **Notice-based system**

49. The International Registry will be a “notice-based” system – that is, it will provide notice that an interest has been registered in relation to a specific MAC asset. The documents on which the interest is based will not be **required/permitted** to be submitted as part of the registration process, and will not be available from the International Registry to those conducting searches.

50. The Registrar will not confirm the accuracy of information provided by registered users, and will not confirm the existence or validity of documents underlying a registration.

#### 15. **Integrity of registration process**

51. The process of registering an international interest will be automated and the Registrar will not be involved in reviewing the validity or accuracy of information prior to it being posted on the International Registry.

## 16. Entry points designated by Contracting States

52. According to Article XVI of the MAC Protocol, a Contracting State may at any time designate an entity or entities in its territory as the entry point or entry points through which there shall or may be transmitted to the International Registry information required for registration. **Section 13 of the draft Regulations**, therefore, provides that a Contracting State may designate an entry point or entry points ("entry point") under Article XVI of the Protocol:

- which shall or may authorise the transmission of information required for registration under the Convention and the Protocol to the International Registry ("authorising entry point"); or
- through which information required for registration under the Convention and the Protocol shall or may be directly transmitted to the International Registry ("direct entry point").

53. A direct entry point shall transmit a registration when the conditions established by it have been satisfied. Such conditions are to be consistent with the Convention, the Protocol, and the Regulations, and the named parties in that registration are approved transacting user entities. Subject to the receipt by the International Registry of the consent from each party whose consent is required under the Convention, the Protocol and the Regulations, including, if so required, the named parties in the subject registration, a registration transmitted by a direct entry point shall be effected when received by the International Registry.

54. Without prejudice to the transmission of information required for registration through a direct entry point, the Registrar shall establish arrangements applicable to the electronic transmission of registration information from, or authorised by, entry points to the International Registry and, after consultations with each designated entry point, shall specify the procedures applicable to that entry point. Such arrangements between an entry point and the International Registry shall not impose any additional cost on the International Registry and shall not adversely affect the functioning of the International Registry system or impose a burden on International Registry resources.

55. A Contracting State designating an entry point shall notify the Depositary and the Supervisory Authority thereof, indicating whether such entry point is an authorising or direct entry point. The Supervisory Authority shall keep the Registrar informed of such designations, and the Registrar shall maintain a current list thereof that is electronically accessible to users.

56. No registration shall be considered invalid by reason of being made otherwise than in conformity with a designated entry point.<sup>12</sup>

## 17. Languages

57. The International Registry will be required to operate as from its entry into operation in English. Additionally, the International Registry will be required to provide services in other languages:

- a. The International Registry will be required to provide helpdesk related services, as well as its frontend website in Arabic, Chinese, English, French, Russian and Spanish from its entry into operation. The fields requesting information from users should also be available in the aforementioned languages.
- b. In addition, the contract between the Registrar and the Supervisory Authority will include a timeline for consideration of the inclusion of an additional, Latin-alphabet

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<sup>12</sup> Added in conformity with Article XVI (3) of the MAC Protocol

language, for registrations and searches.<sup>13</sup> Other languages may be given consideration depending upon the nature of the users of the International Registry. Accordingly, requests to participate must describe how the International Registry would be able to be adapted to operate in such additional language(s) and must include information on the estimated cost that would arise from operating the International Registry in such additional languages.

- c. The International Registry will accept registration in any language which the user may wish to provide, including the use diacritical marks.

~~,with the additional requirement that FAQ information about how to use the International Registry will need to be provided in Arabic, Chinese, English, French, Russian and Spanish. In addition, the contract between the Registrar and the Supervisory Authority will include a timeline for consideration of the inclusion of an additional, Latin-alphabet language, for registrations and searches.<sup>14</sup> Accordingly, requests to participate must describe how the International Registry would be able to be adapted to operate in such additional language and must include information on the estimated cost that would arise from operating the International Registry in such additional languages. Live helpdesk assistance (see paragraph 58) must be provided in English.~~

## 18. **FAQ, technical support and helpdesk**

~~57-58.~~ The International Registry will be required to provide "Frequently Asked Questions" (FAQ) information about how to use the International Registry, as well as:

- ~~• on-line help functions to give users of the Registry assistance in relation to completing Registry transactions;~~
- ~~• real-time assistance (for example, via pop-up windows) to explain the capability of the system, including search and indexing capabilities; and~~
- ~~• training for all users through web-based tutorial training developed by the systems developer, which will guide the user through the process of entering and viewing registrations.~~

~~58-59.~~ The International Registry will be required to provide live helpdesk assistance (email and telephone) to users of the International Registry for at least **XX hours<sup>15</sup>** per week. Such live assistance would need to be provided during working hours of the timezone where the International Registry is located. During hours in which live helpdesk assistance is not available, the International Registry may consider using tools such as chatbots using artificial intelligence to provide technical support.

## 19. **Scalability**

~~59-60.~~ The International Registry must be designed so as to be scalable: that is, so that it is able to be modified (for example, to take account of changes to the Regulations, or to take account of increases in capacity) without the necessity of significant redesign of the software and hardware systems.

~~60-61.~~ The software to be used in the operation of the International Registry may be custom designed and built by the Registrar, or may be based on commercially-available software programs

<sup>13</sup> ~~In order to keep down the Registrar's expenditures it should be considered whether an additional Latin-alphabet language is required.~~

<sup>14</sup> ~~In order to keep down the Registrar's expenditures it should be considered whether an additional Latin-alphabet language is required.~~

<sup>15</sup> According to Section 3.6 of the Regulations live help shall be available as set out in the Procedures. Section 3.5 of the Aircraft Registry Regulations provides that the helpdesk shall be available 24 hours a day, 7 days a week, whereas the Request for Proposals for the International Registry for Railway Rolling Stock refers to 40 hours per week.

with custom modifications. Tenderers are free to decide which approach to take in relation to the acquisition of software, having regard to the functionality requirements, costs and security.

#### 20. **Software upgrades and enhancements**

~~61-62.~~ The software used in the operation of the International Registry shall be regularly upgraded, in accordance with industry best practice, in relation to bugs and security fixes. Other software upgrades and enhancements to the services offered by the International Registry would require the prior approval of the Supervisory Authority. The cost of such other software upgrades and enhancements would be funded on the same basis as other costs of the International Registry: that is, the costs would be taken into account in setting the fees for the International Registry so as to enable the costs of establishing and operating the International Registry to be recovered from International Registry revenues over the course of the contract.

~~62-63.~~ The contract will provide that, prior to the Supervisory Authority requiring the Registrar to undertake software upgrades or enhancements within the final 2 years<sup>16</sup> of the term of the contract, the Supervisory Authority would be required to take into consideration in which way the costs of those upgrades or enhancements could be covered prior to the termination of the term of the contract.

#### 21. **System availability**

~~63-64.~~ The International Registry will be required to be available 97% per year. One reason for this is to ensure the availability of the International Registry for users in all locations and time zones. The 3% of non-availability contemplates maintenance, power outages, hardware problems, etc. Maintenance of the International Registry which would involve the International Registry services being unavailable to users must not be performed during peak periods as determined by statistical data on the usage of the International Registry.

#### 22. **System integrity**

~~64-65.~~ The International Registry information technology system must ensure that data is not able to be added, deleted or manipulated other than in the course of authorised registration transactions.

~~65-66.~~ The successful tenderer will be required to produce, prior to the signature of the contract with the Supervisory Authority, a technical validation certificate from an entity independent of the Registrar (as approved by the Supervisory Authority) that confirms the validity and operability of the IT structure. The Registrar will also be required to provide to the Supervisory Authority a technical validation certificate, from an entity independent of the Registrar (as approved by the Supervisory Authority) that confirms the validity and operability of the IT structure of the International Registry after the first full year of operation of the International Registry, and thereafter as required by the Supervisory Authority.

#### 23. **Contingency and data recovery plans**

~~66-67.~~ The Registrar must provide for contingency and data recovery plans that provide for the integrity of the records and operating systems of the International Registry, and for the full restoration of the records and operating systems in the event that they are compromised. These plans must include the following features:

- a tracking capability for information entered by users of the International Registry;
- a tracking capability to capture full historical record of information and to allow point-in-time reporting of all data manipulation activities performed by each user, including

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<sup>16</sup> The Request for Proposals for the International Registry for Railway Rolling Stock refers to 2 years.

date and time stamps, user identification, Internet Protocol (IP) addresses and dynamic Internet addresses on every record;

- the capability for the Registrar to amend Registry records, in accordance with the Regulations, for example in order to comply with a court order pursuant to Article 44(3) of the Convention; and
- the electronic records of the Registry must be securely stored and must be regularly archived at least at two physically separate locations ensuring that the same event cannot result in the loss of more than one archive (**observe also paragraph 66**).

#### 24. **Capacity for permanent storage of records**

**67-68.** The historical records of the International Registry must be capable of being stored on the database indefinitely, and the Registry must have storage capacity to store up to **XX individual registry transactions each year**.

#### 25. **Domain names, logos etc. – Ownership by the Supervisory Authority**

**68-69.** The Supervisory Authority shall own the intellectual property in the domain names, logos etc. of the International Registry, and the contract between the Supervisory Authority and the Registrar will provide for the Registrar to be granted a licence to use such intellectual property for the purposes of the International Registry for the duration of the contract.

#### 26. **Location of the Registry**

**69-70.** It is preferable, though not required, that the International Registry's computer back-up and storage systems be located in the territory of a Contracting State to the Convention. However, such computer back-up and storage systems cannot be located where they would be on the same primary power grid as the primary computer servers and hardware.

### **B. Technical functions and specifications**

#### 1. **Review and finalisation of data entered by registered users**

**70-71.** The International Registry must provide an opportunity for registered users who are inputting data to view a summary of the information and review it for accuracy prior to that information being confirmed, recorded by the International Registry and saved to the data base. However, the International Registry must ensure that data that has been entered by a registered user cannot subsequently be altered once that data has become searchable.

#### 2. **Search certificates displayed online and searchable**

**71-72.** The International Registry must provide a capacity for search certificates, showing the results of a search of the International Registry, to be displayed online and printed by users.

#### 3. **Multiple simultaneous transactions**

**72-73.** The International Registry must provide a capacity for multiple users in different locations to simultaneously access the International Registry and input data in relation to a single international interest.

#### 4. **Payment system**

**73-74.** The International Registry must provide a secure online payment system. **Tenderers must indicate the currency they intend to use for collecting payments.** ~~The currency of the International~~

~~Registry fees will be X.~~ Tenderers are also invited to submit proposals for a payment system that would minimise payment transaction costs (such as credit card transaction and currency conversion fees) for users of the International Registry, as well as the various types of payment systems they would be willing to provide.

#### 5. **VAT**

~~74-75.~~ All transactions on the International Registry will be subject to the value-added tax (VAT) regime applicable at the location of the International Registry.

#### 6. **Electronic signature**

~~75-76.~~ Registered users will be able to enter information via a unique verified electronic signature. The International Registry must be configured to enable the electronic signatures of multiple parties (for example, debtor, creditor, co-debtor and guarantor) to be provided in respect of a single transaction.<sup>17</sup>

#### 7. **Printability of information**

~~76-77.~~ The International Registry must provide an ability for relevant documents (for example, search certificates) to be printed by users.

#### 8. **Secure payment validation system**

~~77-78.~~ The International Registry must provide a secure electronic payments system enabling the validation of a user's credit card or direct debit information for the purpose of payment of fees in connection with the International Registry.

#### 9. **System design document**

~~78-79.~~ Within XX days<sup>18</sup> of the finalisation of the contract between the Registrar and the Supervisory Authority, the Registrar will be required to provide the Preparatory Commission with a detailed System Design Documentation (SDD) on the equipment hardware/software operation, including civil works dedicated to the supply of a registry system under the contract, such SDD is to be approved by a professional engineer. The SDD shall include, at least, the following information, or its functional equivalents:

- system architecture and layout;
- details relating to:
  - equipment inventory (count, function, brand, model), switches, routers, fire-walls load balancers;
  - network diagrams;
  - servers (database, applications, web, mail, print, file, certificates, backup);
  - hardware configuration (CPU, memory disk capacity etc.);
  - software configuration (operating system, backup, applications);
  - electrical diagram, including the performance of UPS and Generating Set;

<sup>17</sup> Issue: Should specific types of electronic signatures be identified? The e-signature requirements will be discussed and set out in the Regulations.

<sup>18</sup> The Request for Proposals for the International Registry for Railway Rolling Stock refers to a period of 90 days.

In the case where a Registrar intends to use cloud-based hosting, comparable information, to the extent possible, should be provided regarding the specifications of the plan/arrangement the Registrar intends to secure.;

- security (anti-virus, anti-spam, patching policy, intrusion detection, DMZ); and
- system backup (rotation schedule, retention policy, off-site storage, automatic switch-over).

## C. System requirements

~~79-80.~~ The following are the **minimum system requirements** for the International Registry:

### 1. Environment - Telecommunications

~~80-81.~~ The International Registry system shall provide:

- accessibility using a current standard telecommunications protocol, e.g., Transmission Control Protocol/Internet Protocol (TCP/IP), and the World Wide Web. The protocol defines a common set of rules and signals that enables computers on the network to communicate;
- version-level compatibility between the server operating system (OS), the servers ~~Relational Database Management System (RDBMS) database~~<sup>19</sup>, and the software;
- fault-tolerance, i.e., the ability of a system to respond to an unexpected hardware or software failure; and
- a web-based system, with multi-tiered architecture, having the flexibility to optimise performance and reduce resource bottlenecks. For example, these components may include:
  - the presentation processing logic layer (the application code that interacts with a device, e.g., end user's terminal);
  - the business processing logic layer (the application code that uses the input data to perform business tasks);
  - the data manipulation logic layer (the application code that manipulates data within the application); and
  - the database management system processing layer (the actual processing of the database data that is performed by the Database Management System (DBMS)).

### 2. Environment - Workstation

~~81-82.~~ The system shall be designed to provide access to users with various screen resolutions and devices (e.g. smart phones, tablets) and have a responsive design. It shall also be compatible with the most popular internet browsers such as Google Chrome, Microsoft Edge, Internet Explorer 11, Mozilla Firefox, Opera, and Safari. Optionally, the Registrar shall also develop a mobile application interface to access the information on the International Registry through common Internet browser products, released within the past 2 years. The Internet browser must be capable of employing data encryption, with the ability to access an Internet or Intranet web site.

~~82-83.~~ The system shall be compatible with a workstation or resources found in a typical office automation setting and an upward compatible processor to allow software to run not only on the computer for which it was designed, but also on newer, larger, and more powerful models without converting the data. It would be desirable for the system to run without requiring downloading of

<sup>19</sup> This change is based on a comment from a technical expert who said: "RDBMS is not the only option. There may be options to store the data for the Registry using blockchain technology".

applications, add-ins or plug-ins. It would also be required for the system to be mobile-friendly, available to users of smart phones and tablets.

~~83-84.~~ The encryption and user verification systems must permit the registered users to access the International Registry using a hardware-specific digital certificate issued by the International Registry which creates a secure channel to the International Registry.

### 3. **Database**

~~84-85.~~ The International Registry system shall provide:

- standard data access methods to ensure adequate system and data availability for system users;
- data integrity and processing consistency by defining system level validation rules and business logic at the server database;
- capabilities to perform hot backups to ensure high system availability while supporting up-to-the-minute database recovery;
- enhanced configuration management support through a centralised implementation of business logic;
- flexible access by users needing data access through other commercial-off-the-shelf software packages, e.g., downloads to manipulate data on a spreadsheet; and
- automated tools to assist in analysing the data in respect to system performance.

### 4. **Security**

~~85-86.~~ The system's security shall provide:

- firewalls to prevent unauthorised access to or from private networks. For greater security, data will be encrypted;
- the ability to restrict access to the International Registry, or to particular features of the International Registry, to registered users;
- a feature to logoff registered users because of inactivity;
- limitations of access to appropriate system components, i.e., administrative database functions, data entry, views, or reporting of users based on roles, privileges, and access availability;
- limitation of access for users to the Operating System. Access will be only available through the presentation layer;
- software encryption processing that occurs between the client application layer and the software server. All transactions for registration will utilise data encryption while in transmission;
- an on-line method to create and assign user identifications and passwords (although it is recognised that the solutions referred to in **paragraph 28** might involve, for example, the issue of hardware such as USB keys containing log-on certificates);
- to facilitate users and encourage the use of strong passwords, any password based mechanism on the system shall have integration with password management tools.
- the system shall include automated tools to record pertinent data in respect of the security and to provide assistance in analysing this data; and
- physical access security shall be required to the central service site.

### 5. **Maintenance**

~~86-87.~~ The International Registry and its systems must be regularly maintained, with maintenance to include, but not be limited to, hardware, software and telecommunication systems. All maintenance problems must be resolved as soon as possible and so as to ensure system availability in accordance with system availability requirements (see **paragraph 62**). If a maintenance problem cannot be resolved immediately, users must be notified that the problem is being addressed and the approximate time it will take to resolve it.

#### 6. **Connect Times**

~~87-88.~~ Connect times should allow for time outs that take account of the fact that the internet connections may function at different speeds in different regions. The System shall provide for Intranet<sup>20</sup> connect times for an entire action regardless of the number of users according to industry best practice.

#### 7. **Application Infrastructure - Data**

~~88-89.~~ The data elements to be accommodated and maintained in the database shall include:

- the information entered by registered users in relation to each transaction on the International Registry;
- the fee collected for each transaction (the amount of the fee and a brief description of the fee);
- date/time stamps, user identifications and details of encrypted access keys; and
- other information as may be reasonably required pursuant to the Regulations.

~~89-90.~~ The system shall provide:

- the flexibility to add new data fields to support changes in the System processes and regulatory requirements without excessive data modification;
- unlimited capacity for new data elements in the database; and
- configuration management for software releases.

**90-91.** The system shall be in compliance with relevant data protection and privacy related laws and regulations.

#### 8. **Application infrastructure - Edits**

~~91-92.~~ The database shall have editing capability to display guidance when incorrect data is entered using list boxes, text boxes, check boxes or other GUI standards, to ensure compliance with Regulations.

~~92-93.~~ The system shall ensure no transaction on the International Registry (such as the registration of an International Interest) may be finalised until the fee prescribed by the regulations has been paid to the International Registry.

~~93-94.~~ The system shall validate new data to ensure accuracy and consistency with existing data. For example, inconsistency of new data may prevent its entry into the system, such as inconsistency of assignment information with original interest.

#### 9. **Application infrastructure - Applications**

**94-95.** The system shall reliably support On-Line Transaction Processing (OLTP), transaction-based access where the computer responds immediately to user requests, including rollbacks and commits

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<sup>20</sup> Internet connect time standards will not be imposed on the system.

(i.e., rollback is the process of restoring protected resources to the state at the last commit point and commit is the process that causes the changes to the protected resources to become permanent). Data entry locking shall occur at the row level and provide other users and processes read access to "in-transaction" data.<sup>21</sup>

10. **Application infrastructure - Interfaces**

96. The system shall provide the capability for reasonable state-of-the-art interfacing to heterogeneous (unlike) systems and databases including national and regional registries.

95-97. It should be ensured that the system can be used by all users, regardless of their abilities or disabilities.<sup>22</sup>

11. **Application infrastructure - Reporting**

96-98. The system shall be capable of generating statistical and ad hoc reports, e.g. statistical reports on peak periods or selected transactions processed in a particular period.

12. **Application infrastructure - Support**

97-99. As part of the user's logon process, a configuration management function shall be included that allows for automatic distribution of software enhancements from servers to the client, preferably through a browser rather than through block distribution of software to end users-workstations.<sup>23</sup>

13. **Technology enhancements**

98-100. Technology enhancements will be implemented in accordance with best industry practice in order for the system to remain current with advancing technology.

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<sup>21</sup> A technical expert has noted: This requirement reflects a traditional RDBMS environment, and would not be valid in a blockchain environment. It may be helpful to restate this requirement in function terms – what is this trying to achieve – rather than technical terms.

<sup>22</sup> This addition is based on the discussions of the WG and a comment by a technical expert noting: To ensure that the system can be used by all users, regardless of their abilities or disabilities, a requirement for accessibility or universal design should be included, probably in this section. The Web Accessibility Directive Directive (EU) 2016/2102 may be relevant, depending on whether UNIDROIT meets the definition of public body in the Directive. A requirement to comply with the Directive or to otherwise meet the requirements of the WAI WCAG 2.0 standard will ensure that the resulting system can be used by the broadest range of potential users.

<sup>23</sup> This change has been made based on input from a technical expert who noted: Most corporate users will have IT systems that block distribution of software to end users. It would be preferable that the system would run entirely in a browser window, and would not require installation of any software components on client workstations.

## PART 3 – COST SPECIFICATIONS

### A. General

~~99-101.~~ The objectives of the International Registry are to provide an efficient, reliable and secure electronic registration system as contemplated by the Convention and the MAC Protocol. Tenderers submitting requests to participate must set out in detail their proposed methods to achieve these objectives, which shall describe all steps from the requirements analysis System Design Document (see paragraph 78) through to the delivery, implementation and on-going operation of the system. Without limiting the foregoing, requests to participate must address comprehensive risk assessment and management as well as the financing of the system.

~~100-102.~~ Each request to participate must include a comprehensive schedule of estimated costs, in X, for the fulfilment of the obligations of the Registrar, including the establishment and ongoing operation of the International Registry. Such estimates should be made in relation to prices as of DD Month 202Y. The assumptions underlying the estimated costs should be clearly elaborated.

~~101-103.~~ Each preliminary offer submitted with the request to participate must specify the estimated costs for each of the following items associated with the development and establishment of the International Registry, and must in addition specify the costs of any other items not listed below which may be incurred as start-up costs:

(a) Function-related:

- hardware design,
- hardware assembly,
- cloud services,
- software design,
- software creation,
- communication system design,
- communication system creation,
- security system design, and
- real time backup system.

(b) Site and facility related:

- site fit out, and
- furniture and equipment.

(c) Miscellaneous:

- permits,
- insurance, including the cost of insurance referred to in Article 28(4) of the Convention,
- legal expenses, and
- other.

~~102-104.~~ Each preliminary offer submitted with the request to participate must further contain a breakdown of the estimated yearly operating costs for each of the following items and must in addition specify the costs of any other items not listed below which may be annually incurred as for the operations of the International Registry:<sup>24</sup>

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<sup>24</sup> The costs of the Secretariat of the Supervisory Authority will be included in the overall costs of the International Registry to be recovered from income generated by the International Registry's registration fees. These costs will include the expenses incurred by the Supervisory Authority in auditing the Registrar, estimated as at the date of publication of this RFP document to be approximately €15,000 per year.

- personnel (wages and benefits for Registry operations),
- hardware replacement, update and maintenance,
- software replacement, update and maintenance,
- insurance,
- non-recoverable taxes and duties on operations (excluding taxes payable on net income or gains),
- permit renewals,
- legal, audit and other professional expenses,
- costs related to operating the Registry in an additional language (see paragraph 55),
- promotion and marketing [(€~~xx,xxx~~25,000<sup>25</sup>] per year), and
- other.

~~103~~-105. Tenderers are reminded that submission of a total price is required for evaluation and comparison of the financial offer. The total price shall be calculated on the basis of the one-time set-up costs (as detailed under paragraph 100) and the operations costs for one year (flat, including the annual average for any software and hardware updates which may be required over the initial contract term).

## B. Why costs estimates are required

~~104~~-106. The estimates of costs are required to be provided, because the costs of establishing and operating the International Registry will be reflected in the fees that are established for using the International Registry. Article 17(2)(h) of the Convention provides that the Supervisory Authority shall set and periodically review the structure of fees to be charged for the services and facilities of the International Registry. Article XVIII (2) of the MAC Protocol provides that these fees shall be determined so as to recover the reasonable costs of establishing, operating and regulating the International Registry and the reasonable costs of the Supervisory Authority associated with the performance of the functions, exercise of the powers, and discharge of the duties contemplated by Article 17(2) of the Convention.

## C. Ancillary services<sup>26</sup>

~~107.~~ As noted in paragraph ~~167~~, ~~through the International Registry website alongside managing the International Registry~~, the Registrar will have the potential to offer additional income-generating services ("ancillary services") ~~which do not impact the integrity of the International Registry~~. While any such additional services could only be provided with the prior consent of the Supervisory Authority, it is expected that the Supervisory Authority would favourably consider, and work with the Registrar to facilitate, the provision of any such services that are compatible with the International Registry's functions, ~~as long as such ancillary activities may not intrude with or compromise the primary activities of the registrar~~.

~~105-108.~~ The Registrar may, at no point in time, offer legal, arbitration, or other dispute settlement mechanism related services, or advisory services.

Examples of possible ancillary services include:

- consultancy services,

<sup>25</sup> The Request for Proposals for the International Registry for Railway Rolling Stock refers to expenditure of €25.000 per year towards promotion activities.

<sup>26</sup> Which services, if any, might be of concern? Should the section be kept?

- company partnership service,
- employment opportunities' page,
- industry briefings (subscription),
- identification plates, and
- XX.

~~106-109.~~ For the purpose of applying the revenues from ancillary services, such services would be divided into 2 categories. The first category would encompass services, the provision of which is totally dependent on, and can only be offered through, the Registry website. An example would be advertising on the International Registry website. For such services, at least 40% of the gross revenues will be required to be allocated towards the payment of the establishment costs of the International Registry. The second category would encompass services that would be able to be offered independently of the International Registry website. An example would be XX. For those services, the Registrar would be entitled to realise some, none or all of the revenues as profit, subject to accounting for the pro rata costs of using the resources (such as computers, personnel) on the provision of those ancillary services.

#### **D. The relationship between costs and fees**

~~107-110.~~ The MAC Protocol provides that it is the responsibility of the Supervisory Authority to set the fees to be charged in connection with the International Registry, and this will be reflected in the contract between the Registrar and the Supervisory Authority. In relation to the registration and search services provided under the MAC Protocol, the Supervisory Authority, in close consultation with the Registrar, will establish (and periodically review, as appropriate) the fees having regard to all relevant factors including assumptions as to Registry operating costs and transaction volumes. The fees will be established so as to recover the reasonable costs of establishing, operating and regulating the International Registry and the reasonable costs of the Supervisory Authority associated with the performance of the functions, exercise of the powers and discharge of the duties contemplated by Article 17(2) of the Convention. The Supervisory Authority will work closely with the Registrar in establishing a Registry implementation schedule linked to the progress being made on securing state ratifications; this approach should serve to keep down the Registrar's expenditures during the early stages of implementation. Also, the Supervisory Authority will partner with the Registrar to promote the MAC Protocol to potential Contracting States with a view to maximising the pool of potential revenue-generating Registry transactions.

## PART 4 – INFORMATION ABOUT KEY CONTRACT PROVISIONS

### A. Introduction

~~108~~.111. The contract between the Registrar and the Supervisory Authority will set out the rights, duties, obligations and entitlements of the Registrar in relation to the operation of the International Registry. The following sections provide information in relation to some of the key contract provisions which may be subject to negotiations as far as not mandatory in accordance with the Convention, the MAC Protocol, the Regulations or the applicable law.

### B. Requirement to operate International Registry in conformity with the Regulations [mandatory]

~~109~~.112. Article 17(2)(d) of the Convention provides for the Supervisory Authority to make regulations dealing with the operation of the International Registry. The Regulations will establish the framework for the establishment and operation of the International Registry, and the contract between the Registrar and the Supervisory Authority will provide that the Registrar must operate the International Registry in conformity with the Regulations. The Regulations will be developed on an ongoing basis in the lead-up to the entry into force of the MAC Protocol and may be subsequently amended. The Supervisory Authority will consult closely with the Registrar in the development, and revision, of the Regulations.

### C. Contract to define portability of custom software [non-mandatory]

~~110~~.113. The contract between the Registrar and the Supervisory Authority shall require that all rights to software acquired or developed by the Registrar, including its sub-contractors, for (but not necessarily exclusively) the operation of the International Registry shall be transferred to the Supervisory Authority without restriction or limitation, at the earliest possible point in time, with the Registrar, including its sub-contractors where strictly required, maintaining the right of use of the software for the operation of the Register for the term of the contract. If the contract is terminated before the expiration of its initial term for any reason other than the default or insolvency of the Registrar, the Registrar shall be eligible to receive the yet unamortised costs incurred for the acquisition or development of the software. Such unamortised costs would be calculated by reference to a formula that will be set out in the contract.

### D. Proprietary rights in data bases [mandatory]

~~111~~.114. Pursuant to Article 17(4) of the Convention, the contract between the Registrar and the Supervisory Authority will provide that the Supervisory Authority will own all proprietary rights in the data bases and archives of the International Registry.<sup>27</sup>

### E. Contract to define termination [non-mandatory]

~~112~~.115. The contract between the Registrar and the Supervisory Authority will define events that entitle the parties to terminate the contract, which will include default by the Registrar in performing its obligations and the Registrar becoming, or being at imminent risk of becoming, insolvent or bankrupt or unable to pay its debts as they fall due. The contract will also provide that in the event of a default, the Supervisory Authority shall be entitled to immediate access to all property connected with the operation by the Registrar of the International Registry, including the computer

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<sup>27</sup> [Additional consideration needs to be given to the issue of intellectual property rights in the software used by the International Registry.](#)

hardware equipment, [full access to all third party services, including, but not limited to, cloud hosting services,<sup>28</sup>](#) and the physical premises of the International Registry.

#### **F. Performance guarantees [non-mandatory]**

~~113.~~[116.](#) The contract between the Registrar and the Supervisory Authority will provide that the Supervisory Authority may require the legal and beneficial owners of the Registrar to provide guarantees of the performance by the Registrar of its obligations.

#### **G. Change in the legal or beneficial ownership or control of the Registrar [mandatory]**

~~114.~~[117.](#) The contract will also provide that any material change in the legal or beneficial ownership or control of the Registrar will require the prior approval of the Supervisory Authority.

#### **H. Test phase [non-mandatory]**

~~115.~~[118.](#) The contract between the Registrar and the Supervisory Authority will provide that a test phase of the International Registry will be conducted, and must commence no later than **6 months** after, and conclude no later than **8 months** after, the date of the approval by the Preparatory Commission of the final contract between the Supervisory Authority and the Registrar. Full implementation and commissioning of the System must be able to be completed no later than **12 months** after the date of the approval by the Preparatory Commission of the final contract between the Supervisory Authority and the Registrar. The full implementation and commissioning of the International Registry refers to the preparedness for the International Registry to immediately begin full operations. However, the precise date of the entry into force of the MAC Protocol, and of the actual commencement of full operations of the International Registry, will be determined in accordance with Article XXV of the MAC Protocol, and that date may be after the date that the full implementation and commissioning of the International Registry is achieved.

#### **I. Costs of the International Registry [non-mandatory]**

~~116.~~[119.](#) It is expected that the Supervisory Authority will have regard to the costs and revenues of the International Registry when setting, and amending, the fees, with a view to the costs of the International Registry being **amortised over the 5-year period of the initial contract**. For this reason, the contract between the Registrar and the Supervisory Authority will require that audited details of costs and expenses of the Registrar and the International Registry be submitted to the Supervisory Authority at regular intervals. The contract may also require that expenditures by the Registrar above threshold limits only be incurred following approval by the Supervisory Authority.

#### **J. Liability and insurance [mandatory]**

~~117.~~[120.](#) The contract between the Registrar and the Supervisory Authority will deal with liability of the Registrar and insurance, in accordance with the provisions of the Convention and MAC Protocol. Article 17(5) of the Convention provides that the Registrar is required to ensure the efficient operation of the International Registry and to perform the functions assigned to it by the Convention, the MAC Protocol, and the Regulations. Pursuant to Article 28(1) of the Convention, the Registrar will be liable for compensatory damages for loss suffered by a person directly resulting from an error or omission of the Registrar and its officers and employees, or from a malfunction of the international

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<sup>28</sup> [This change is based on a comment from a technical expert noting: This clause may need to be updated to consider possible use of Cloud hosting services, where data and software are physical hosted by a 3rd party hosting company.](#)

registration system. Article 28(4) of the Convention requires that the Registrar procures insurance or financial guarantee covering the liability set out in Article 28 of the Convention, and Article XVIII(6) of the MAC Protocol provides that the insurance or financial guarantee referred to in Article 28(4) of the Convention shall cover the liability of the Registrar under the Convention to the extent provided by the Regulations. According to Section 14.4 of the draft Regulations the amount of insurance or financial guarantee required under Article 28(4) of the Convention and Article XVIII(6) of the Protocol shall be determined and may be revised by the Supervisory Authority.

### **K. System design documentation [non-mandatory]**

~~118~~.121. Within **X days** of the finalisation of the contract between the Registrar and the Supervisory Authority, the Registrar will be required to provide the Preparatory Commission with a detailed System Design Documentation (SDD) on the equipment hardware/software operation, including civil works dedicated to the supply of a registry system under the contract, such SDD to be approved by a professional engineer. The SDD shall include, at least, the following information:

- system architecture and layout;
  - Details relating to:
    - equipment inventory (count, function, brand, model), switches, routers, fire-walls load balancers;
    - network diagrams;
    - servers (database, applications, web, mail, print, file, certificates, backup);
    - hardware configuration (CPU, memory disk capacity etc);
    - software configuration (operating system, backup, applications);
    - electrical diagram, including the performance of UPS and Generating Set;
- In the case where a Registrar intends to use cloud-based hosting, comparable information, to the extent possible, should be provided regarding the specifications of the plan/arrangement the Registrar intends to secure.
- security (anti-virus, anti-spam, patching policy, intrusion detection, DMZ); and
  - system backup (rotation schedule, retention policy, off-site storage, automatic switch-over).

### **L. Ownership of domain names and logos [mandatory]**

~~119~~.122. The contract between the Registrar and the Supervisory Authority will provide that the Supervisory Authority shall own the intellectual property in the domain names, logos etc of the International Registry, and shall grant the Registrar a licence to use such intellectual property for the purposes of the International Registry for the duration of the *contract*.

### **M. Parties to the Contract [mandatory]**

~~120~~.123. The contract negotiations with the tenderer will be conducted by representatives of the Preparatory Commission Member States, under the authority of the Preparatory Commission and those Member States. The contract will be entered into between the successful tenderer and the Supervisory Authority, and on behalf of the Supervisory Authority will be signed under authorisation of the Preparatory Commission. The contract will provide that it will be endorsed by the Supervisory Authority upon the entry into force of the MAC Protocol.

### **N. Law of the Contract [non-mandatory]**

~~121~~.124. The contract will be governed by **XXX law**.

## PART 5 – PRACTICAL INFORMATION ABOUT THE SOLICITATION PROCESS

~~122~~.125. This Document has been approved for distribution by the Preparatory Commission. It will be distributed to the following States:

- Contracting Parties to the Convention, the Aircraft Protocol, the Luxembourg Rail Protocol, the Space Protocol, and the MAC Protocol;
- States that participated in the Diplomatic Conference to adopt the Convention and the Aircraft Protocol held in Cape Town, South Africa (20 October – 16 November 2001);
- States that participated in the Diplomatic Conference to adopt the Luxembourg Rail Protocol (12-23 February 2007);
- States that participated in the Diplomatic Conference to adopt the Space Protocol (27 February-9 March 2012);
- States that participated in the Diplomatic Conference to adopt the MAC Protocol (11-22 November 2020);
- Member States and Observer States of the Preparatory Commission; and
- UNIDROIT Member States.

~~123~~.126. This RFP Document will also be available on the UNIDROIT website (www.unidroit.org). Subject to sufficient funding it may also be advertised in one or more suitable publications.

### A. Requests to participate and preliminary offer - content and format

~~124~~.127. Tenderers must submit a request to participate and a preliminary offer which is clear, comprehensive and self-contained. The Preparatory Commission reserves the right to assess each offer solely on the basis of its content and without requesting any additional information or clarification. However, the Preparatory Commission also reserves the right, at its discretion, to request additional information or clarification from tenderers regarding the contents of their preliminary offer.

### B. Supplementary information

~~125~~.128. This RFP Document is intended to provide all information necessary to enable entities to prepare and submit requests to participate. Any entity requiring clarification or additional information should send an email request to: info@unidroit.org no later than one month prior to the closing date for the receipt of proposals (**that is, no later than DD MM 202X**). The Preparatory Commission shall consider such requests and if clarification or additional information is provided, this shall also be posted on the UNIDROIT websites without information that would identify the entity that made the request.

### C. Practical information in relation to submission of request to participate and preliminary offer

~~126~~.129. The request to participate and preliminary offer must consist of the following elements **A to D**, clearly distinguishable in the preliminary offer submitted:

- A.** The **Cover Letter**, dated and signed by the tenderer or by any other duly appointed representative, declaring acceptance of the conditions in this RFP and its unconditional request to participate in the tender process in compliance with the rules set out in this RFP and in particular unreservedly accepting any decision of the Preparatory Commission in relation to the selection of the preferred tenderer. If the request is submitted by a consortium or group of service providers, it must be accompanied by a letter signed by each member undertaking to request the participation in the tender and specifying each member's own role and qualifications.
- B.** The **Administrative File** consisting of the following sub-elements:
1. **Identification Sheet** to be signed by the tenderer or each member in case of bidding as a group or consortium (Template provided in Annex A);
  2. **Financial and Economic Capacity Table of Answers** to be signed by the tenderer or each member in case of bidding as a group or consortium (Template provided in Annex B) providing evidence of sufficient **financial capacity** to perform the services as Registrar in particular as regards capitalisation and beneficial ownership and control (financial selection criteria);
  3. **Evidence of the Tenderer's** (or group/consortium members') **Professional and Technical Capacity** having sufficient relevant business and management experience to successfully establish and operate the International Registry, e.g. by submitting a list and description of comparable services provided in the past (professional and technical selection criteria); and
  4. **Declaration of Honor** that the tenderer (including member of a group or consortium and any subcontractor) is not in a situation described in Annex C (Declaration of honor) which would exclude it from participation (exclusion criteria).
- C.** The **Technical Offer** providing detailed and concise information on the tenderer's approach to comply with the technical and regulatory needs of setting up and operating the Register as described pursuant to this RFP.
- D.** The **Financial Offer** providing information on the costs for setting up and for annual operation of the Register as described in the Technical Offer. The offer shall provide the one-time set-up costs and annual operation costs (one year) detailing the cost elements (i) separately and (ii) in total.

**127.130.** The elements **A to D** shall be submitted in two signed paper originals, two identical paper copies, each in separate and sealed envelopes marked accordingly, and one CD-ROM or USB key with the full set of documents in machine readable format (**at least MS Office 2007** or later, or Adobe Reader Version **89.0** or later). All documents must be submitted in the English language. Documents and storage devices submitted will not be returned to the tenderer and no compensation will be paid for costs incurred for the preparation of the request to participate, the offer, the following negotiation process and any amendments of the offer and follow-up submissions.

**128.131.** The documents and items stipulated in paragraph 126 must be sent, by mail or courier in a sealed container, to:

UNIDROIT  
ATTN. [NAME]  
Via Panisperna, 28  
Rome, Italy, 00184

The container shall be clearly labelled "Tender Documentations for Selection of the MAC Protocol Registrar – not to be opened by internal mail service".

Requests to participate and preliminary offers may also be delivered in person at the above address between the hours of 9am and 6pm, Monday to Friday. Receipt of requests to participate and preliminary offers will be acknowledged by letter or email; in case of personal delivery, the tenderer shall ensure to obtain a receipt with date and time as proof of delivery. A return address and email address must be included with each proposal.

~~129~~132. In order to be taken into consideration, requests to participate and preliminary offers must be received by UNIDROIT no later than 6pm on DD MM 202Y. The Preparatory Commission reserves the right to exclude from the tender process any proposal received after that date and time.

#### **D. Evaluation and selection process**

~~130~~133. Each request to participate and preliminary offer received in due time will be evaluated by the Preparatory Commission in relation to how the request to participate and preliminary offer addresses the criteria and requirements set out in this RFP. The Preparatory Commission may provide entities that have submitted requests to participate and preliminary offers with an opportunity to make a presentation of their request to participate and preliminary offer to the Preparatory Commission under equal terms and conditions.

~~131~~134. The Preparatory Commission will conduct an evaluation of the requests to participate and preliminary offers, drawing upon such expertise as shall be considered appropriate. The Preparatory Commission shall take all reasonable steps to ensure that the evaluation of requests to participate and preliminary offers is fair and free from bias. In the course of that evaluation, the Preparatory Commission reserves the right to request further information or clarification from any or all of the tenderers in relation to their respective requests to participate and preliminary offers.

~~132~~135. The Preparatory Commission, in a selection stage, will first evaluate the sub-elements of Part B of the request to participate and preliminary offer along the technical and professional as well as the financial selection criteria and the exclusion criteria described under paragraph 126 above.

~~133~~136. Only tenderers who provide sufficient evidence of their financial as well as technical and professional capacity and are fully compliant with the criteria subject to the declaration of honor will pass the selection stage and will be further evaluated with regard to their technical and financial offer – the evaluation stage. The Preparatory Commission reserves the right to request further information for clarification of information submitted to the extent that it does not substantially alter the offer submitted.

~~134~~137. The Preparatory Commission will evaluate the technical offer along the following criteria and may award a total maximum technical score of 100 points, regarding:

- (a) the extent to which the proposal addresses the technical requirements of the International Registry, in particular the technical requirements set out in Part 2 of this RFP (maximum possible points: 70)
- (b) the extent to which the proposal accepts the key contract provisions set out in Part 4 of this RFP or provides proposals for alternative provisions equally acceptable to the Preparatory Commission (maximum possible points: 30)

~~135~~138. The Preparatory Commission will evaluate the financial offer on the basis of the total price calculated on the basis of the one-time set-up costs and annual operations costs (flat, including the annual average for any software and hardware updates which may be required over the initial

contract term – see **paragraph 101** for details on the annual costs elements). Tenderers are reminded that submission of a *total price* is required for evaluation and comparison of the financial offer.

~~136.~~139. The financial score for the financial offer will be calculated as follows:

$$\text{Tenderer } X = (\text{Price Total of Cheapest Tender Received} / \text{Price Total of Tender } X) * 100$$

~~137.~~140. The Preparatory Commission will rank the preliminary offers as follows:

$$\text{Final score for tender } X = \text{Technical score} * 0.7 + \text{Financial score} * 0.3^{29}$$

~~138.~~141. The preliminary offer with the highest score will be considered as “preferred tenderer” with the prospect of providing best value for money.

~~139.~~142. The Preparatory Commission will invite the preferred tenderer to negotiations for detailing and refining the technical and financial offer and finalising the contract terms accordingly.

~~140.~~143. If additional issues arise during the course of the negotiations, the Preparatory Commission reserves the right to adjust the technical and cost requirements set out in this RFP.

~~141.~~144. If the Preparatory Commission and the preferred tenderer do not for any reason conclude the negotiations for a contract providing for the appointment of the preferred tenderer as the Registrar, the Preparatory Commission shall, unless it decides that the circumstances otherwise require, enter into negotiations with the entity that submitted the preliminary offer with next highest final score.

~~142.~~145. The contract will be entered into between the successful tenderer and the Supervisory Authority, and on behalf of the Supervisory Authority will be signed by an authorised representative of the Preparatory Commission in its capacity as acting Supervisory Authority.

## **E. Illustrative time frames**

~~143.~~146. The following sequence illustrates the RFP process (actual dates may vary according to the circumstances):

- (a) [DD MM] – RFP is issued;
- (b) [DD MM] (a + 3 months) – final date for the request to participate and preliminary offer to be submitted;
- (c) [DD MM] (b + 3 months) – evaluation by Preparatory Commission and notification of all tenderers on their ranking, notification to the preferred tenderer – preferred tenderer should be prepared to commence contract negotiations within 4 weeks of the notification – although may be subject to change;
- (d) [DD MM] (estimated) (c + 3 months) – finalisation of contract negotiations between the Preparatory Commission and the preferred tenderer;
- (e) [DD MM] (estimated) (d + 1 month) – approval by the Preparatory Commission of the final contract between the Supervisory Authority and the preferred tenderer;
- (f) [DD MM] (e + 3 months) – submission to the Supervisory Authority by the Registrar of the System Design Document (SDD) as referred to in paragraph 78;
- (g) No later than 6 months after (e) – commencement of test phase of the International Registry;
- (h) No later than 8 months after (e) – completion of test phase of the International Registry;

- (i) No later than 12 months after (e) – full implementation and commissioning of the International Registry. The full implementation and commissioning of the International Registry refers to the preparedness for the International Registry to immediately begin full operations. However, the precise date of the entry into force of the MAC Protocol, and of the actual commencement of full operations of the International Registry, will be determined in accordance with Article XXV of the MAC Protocol, and that date may be after the date that the full implementation and commissioning of the International Registry is achieved (see Annex 1, paragraph 149).

~~144,147.~~ Ancillary services, as outlined in paragraph 104, will be able to be provided – subject to the prior approval of the Supervisory Authority – as soon as practicable and, in particular, will be able to be provided prior to the date of entry into force of the MAC Protocol.

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**ANNEX 1****ADDITIONAL BACKGROUND INFORMATION RELEVANT  
TO THE INTERNATIONAL REGISTRY***Information about the Cape Town Convention and the MAC Protocol*

~~145.~~148. The Cape Town Convention on International Interests in Mobile Equipment<sup>30</sup> was adopted on 16 November 2001 at a Diplomatic Convention held in Cape Town. The Convention establishes a system to facilitate asset-backed financing of high-value mobile equipment and in particular it creates an international registration system for the registration of specific types of international interests over the equipment. The Convention entered into force on 1 March 2006. As at 15 September 2020 it had 82 Contracting States.<sup>31</sup>

~~146.~~149. The Convention is a “framework” convention, and its provisions are supplemented by Protocols relating to different categories of equipment. The Convention specifies that different international registries may be established for different categories of objects.

~~147.~~150. The Protocol to the Convention on International Interests in Mobile Equipment on Matters specific to Aircraft Equipment (the Aircraft Protocol) was also adopted on 16 November 2001, and also entered into force on 1 March 2006. It applies the provisions of the Convention to aircraft objects (airframes, aircraft engines and helicopters). An International Registry established for registrations of interests covered by the Aircraft Protocol commenced operations on 1 March 2006.<sup>32</sup> As 15 September 2020 it had 79 Contracting States.<sup>33</sup>

~~148.~~151. Subsequently, the Luxembourg Rail Protocol was adopted on 23 February 2007, and presently has 9 signatories (as of 15 September 2020), whereas the Space Protocol was adopted on 9 March 2012 and has 4 signatories (as of 15 September 2020).<sup>34</sup>

~~149.~~152. More recently, the Protocol to the Convention on International Interests in Mobile Equipment on Matters specific to Mining, Agricultural and Construction Equipment was adopted at a Diplomatic Conference in Pretoria, South Africa on 22 November 2019. The Protocol extends the scope of the Cape Town Convention system to MAC sectors. The MAC Protocol will enter into force (as per Article XXV of the MAC Protocol) following the deposit of the fifth instrument of ratification, acceptance, approval or accession; and the deposit by the Supervisory Authority with the Depositary of a certificate confirming that the International Registry is fully operational. The Protocol has 5 signatory States as of 15 October 2020.

*The International Registry*

~~150.~~153. The Convention and its protocols contemplate the establishment and operation of modern, electronic International Registries with the following features:

- electronic and internet-based;

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<sup>30</sup> The text of the Cape Town Convention is available from the following page on the UNIDROIT website: <http://www.unidroit.org/english/conventions/mobile-equipment/main.htm>

<sup>31</sup> <https://www.unidroit.org/status-2001capetown>

<sup>32</sup> The website of the International Registry is: [www.internationalregistry.aero](http://www.internationalregistry.aero).

<sup>33</sup> <https://www.unidroit.org/status-2001capetown-aircraft>

<sup>34</sup> <https://www.unidroit.org/status-2007luxembourg-rail>, <https://www.unidroit.org/status-2012-space>

- facility for creditors to register their registrable interests (defined by the Convention and described as “international interests”) in objects of mobile equipment (the advantages of registration of a security interest include that a registered security interest will have priority over subsequently-registered interests and interests that are not registered); and,
- capacity for the details of the registered international interests to be made available to whomever may conduct a search of the International Registry, with such searches to be able to be conducted at any time from any place via an internet connection to the International Registry.

#### *The Supervisory Authority and Registrar*

~~151~~154. Article 17(2) of the Convention invests the Supervisory Authority with a number of specific duties, including:

- to establish or provide for the establishment of the International Registry;
- to appoint and dismiss the Registrar;
- to ensure that any rights required for the continued effective operation of the International Registry in the event of a change of Registrar will vest in or be assignable to the new Registrar;
- to supervise the Registrar and the operation of the International Registry;
- to set and periodically review the structure of fees to be charged for the services and facilities of the International Registry; and
- to do all things necessary to ensure that an efficient notice-based electronic registration system exists to implement the objectives of the Convention and protocol.

~~152~~155. Article 17(5) of the Convention provides that the Registrar shall ensure the efficient operation of the International Registry and perform the functions assigned to it by the Convention, the protocol and the regulations.

**ANNEX 2****RELEVANT PROVISIONS OF THE CONVENTION AND MAC PROTOCOL***Introduction*

~~153~~156. The following section outlines some of the provisions of the Convention and the MAC Protocol most relevant to the functions of the Registrar and the operation and role of the International Registry.

*Priority of registered interests*

~~154~~157. Article 29(1) of the Convention establishes a basic priority rule regarding “international interests” in items of MAC Equipment<sup>35</sup> which are registered on the International Registry. This entails that such interests take priority over any other interest subsequently registered and over an unregistered interest. One exception to the priority rule is that Contracting States may declare that certain categories of non-consensual rights or interests will take priority over an interest registered on the International Registry – however, such declarations themselves are to be notified to, and must be searchable on, the International Registry.

~~155~~158. For the purpose of the priority rules and determining whether another interest was registered “subsequently”, the time when the registration becomes “searchable” is the relevant time. The Convention provides in Article 19(2) that a valid registration is complete upon the entry of the required information into the International Registry’s database so as to be searchable. The Convention provides in Article 19(3) that a registration is searchable when the International Registry has assigned it a sequentially ordered file number, and the registration information may be accessed at the International Registry.

*Registry search certificates*

~~156~~159. Article 22 of the Convention provides that any person may make or request a search of the International Registry by electronic means, and upon receipt of a request for a search the Registrar must issue a registry search certificate by electronic means, such certificate to state all of the registered information (or that there is no registered information) and the date and time of registration of the information. Article 24 of the Convention provides that a document which purports to be a certificate issued by the International Registry is prima facie proof that it has been so issued, and of the facts recited therein.

*Requirements for effecting registration*

~~157~~160. Pursuant to Article 18(1) of the Convention, the MAC Protocol and the regulations made under the Protocol must specify the requirements (including the criteria for the identification of MAC assets) for effecting a registration, for making searches and issuing search certificates, and for ensuring confidentiality. Pursuant to Article 18(4) of the Convention, the Registrar must arrange for registrations to be entered into the International Registry database and made searchable in chronological order of receipt, and the file must record the date and time of receipt.

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<sup>35</sup> The terms “agricultural equipment”, “construction equipment”, and “mining equipment” are defined in Article I(2)(a),(b), and (o) of the MAC Protocol respectively. They directly point to the categories of equipment which fall within certain codes within the Harmonized System which can be found in the Annexes of the MAC Protocol.

### 24/7 operations

~~158.~~161. Article XVIII(5) of the MAC Protocol provides that the functions of the International Registry must be operated and administered by the Registrar on a twenty-four hour basis. This will ensure that registration of international interests, and other International Registry services, are provided at any time in accordance with the business hours of the jurisdiction where the relevant transactions take place. However, in recognition of the fact that the International Registry may need to be taken off-line for short periods (for example, to perform software upgrades), the Registrar will be required to commit to a 97% availability of the International Registry (see paragraph 62).

### Consent

~~159.~~162. Article 20 of the Convention provides that a registration may be registered, amended, or extended, by either party with the consent in writing of the other party. Further, a registration may be discharged with the consent of the person in whose favour it was made. This means that the International Registry will need to include a system for the provision of consent by registered users to the registration of interests in MAC equipment in which they have an interest. However, the Registrar is not under any duty to actively enquire as to whether a consent to registration under Article 20 has been given or is valid (Convention Article 18(2)), and those questions will not need to be determined by intervention of the Registrar at the time of registration. Other legal and factual issues in respect of which the Registrar will not be required to intervene with human vetting include:

- whether the interest being registered is an "international interest" for the purposes of the Convention and the MAC Protocol;
- a party has the rights that it purports to dispose (for example, whether a debtor has an interest in the MAC asset; and
- whether a submission to the International Registry was made by a party with internal power to act (that is, whether a corporate entity has obtained the necessary internal corporate approvals).
- Whether a piece of equipment being registered falls within the scope of the MAC Protocol.<sup>36</sup>

~~160.~~163. Consistent with the principle that the International Registry shall be electronic and highly automated, a registration will only need to comply with the electronic application form and be accompanied by the required fee in order to be registered.

### "Entry points"

~~161.~~164. Article XVI of the MAC Protocol implements for MAC equipment Article 18(5) of the Convention by providing that it is for each Contracting State to decide whether to make a declaration designating an entity as an entry point for the transmission of registration information to the International Registry.<sup>37</sup> For example, a Contracting State may wish to utilise an existing national registration system, modified to enable or require the holder of a national interest which also constitutes an international interest to make one input to the national entry point which will simultaneously procure registration of the national interest and transmission of details of the international interest to the International Registry. The International Registry would need to make arrangements with any designated entry point to ensure that the technical and other details necessary to enable registration information to be transmitted are in place.

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<sup>36</sup> Would this be an obligation for the Registrar?

<sup>37</sup> The designation of an entry point may not apply in relation to notices of national interests, or of registrable non-consensual rights or interests, arising under the law of another State.

### *Discharge or expiry of registrations*

~~162~~165. \_\_\_\_\_ Registrations on the International Registry will remain effective until they are discharged, or until the expiry of any period specified in the registration (Convention Article 21). Where the obligations secured by a registered interest have been discharged the holder of the interest must, without undue delay, procure the discharge of the registration. The International Registry will need to provide systems that minimise the risk of unauthorised discharge (or similar actions, such as amendment) by requiring a matching of the electronic signature of the initial registrant and that of the discharging (or amending) party.

### *Types of interests that may be registered*

~~163~~166. \_\_\_\_\_ As specified in Article 16 of the Convention, the International Registry shall be established for registrations and recordings of:

- international interests, prospective international interests and registrable non-consensual rights and interests;
- assignments and prospective assignments of international interests;
- acquisitions of international interests by legal or contractual subrogation under the applicable law;
- notices of national interest;
- subordinations of any of the interests noted above;
- Notices of sales;
- recording of rights assignments and rights reassignments; and
- recording of acquisitions of debtor's rights by subrogation.<sup>38</sup>

### *The Registrar and court jurisdiction*

~~164~~167. \_\_\_\_\_ Article 44(1) of the Convention provides that courts of the place in which the Registrar has its centre of administration shall have exclusive jurisdiction to award damages or make orders against the Registrar. This jurisdiction would be limited to:

- matters relating to the Registrar's liability in accordance with the Convention or MAC Protocol;
- making orders requiring the Registrar to discharge a registration where a person has failed to respond to a demand to discharge a registration and that person cannot be found or no longer exists; and
- making orders requiring the Registrar to give effect to an order of a court with jurisdiction under the Convention or MAC Protocol that a person procure the amendment or discharge of a registration and that person fails to comply with the order.

Apart from these examples, no court is able to make orders or give judgements or rulings against the Registrar. The assets, documents, data bases, and archives of the International Registry shall be inviolable and immune from seizure or other legal or administrative process (Convention Article 27(4)).

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<sup>38</sup> \_\_\_\_\_ Need to confirm whether these are found in the MAC Protocol. Also need to check if I have missed anything.

**ANNEX 3****STATEMENT OF REQUIREMENTS (SOR)****Service overview**

*An electronic MAC Registry is the foundation service offering that allows the Registrar to deliver registration and search services for international interests in Mining, Agricultural and Construction (MAC) equipment for Users.*

The service (referred to as the MAC Registry in this document) will allow the Registrar to offer a structured and desirable experience for Users. Registrations and searches will be automatically actioned through a predefined workflow where possible.

The following table outlines the key phases of the registration and search service process:

<b><u>PHASE</u></b>	<b><u>DESCRIPTION</u></b>
<b><u>Discover</u></b>	The MAC Registry will establish a website with User eligibility tools as the first touchpoint, before delivering in-scope elements such as an online account to enable secure and customised access for Users.
<b><u>Engage</u></b>	Engage enables Users to make, amend or discharge a registration or conduct a search. Users (other than casual users who perform one-off searches) will use their online account to access web forms and payment services. The MAC Registry will ensure suitable identity and access management to securely authorise Users and control access to secure services. The MAC Registry allows for integration with other services both internally and externally via Application Programming Interfaces (API) to exchange structured data. The MAC Registry executes automated workflow processing based on pre-defined workflow rules.
<b><u>Action</u></b>	Action is the phase that processes a request for a registration or a search. The MAC Registry provides a Component for processing of payments of fees for a registration or search service.
<b><u>Deliver</u></b>	Deliver finalises the request for a registration or a search and delivers the outcome to the User. Records management and User relationship management Components are also required during this service phase.
<b><u>Maintain</u></b>	Maintain ensures ongoing compliance monitoring is adhered to and enforced. Audits and assurances are customary in this phase, especially regarding reporting and analysis services that provide insights. A reporting and analytics component is required for this phase. A Component for financial management service is required in this phase which will also allow for billing arrangements and collections for Users who have approved credit facilities with the Registrar.

**Components overview**

*The MAC Registry will use several products and processes to deliver its services.*

The table below shows the products and processes, referred to as components, which are required for the services to work as intended. Each Component forms an important part of the MAC Registry and all are to be delivered to enable the end-to-end service. Components have been grouped according to the most relevant service phase noting that some of the Components will cross over phases.

<b>ID</b>	<b>COMPONENT</b>	<b>DESCRIPTION</b>	<b>PHASE</b>
<b>User Experience</b>			
<u>C-01</u>	<u>Accessibility</u>	<u>Allows Users with varying abilities access to services in a friendly manner.</u>	<u>Discover</u>
<u>C-02</u>	<u>Language Support and Translation</u>	<u>Provides multi-language translation services for Users throughout their interactions.</u>	<u>Discover</u>
<u>C-03</u>	<u>Correspondence</u>	<u>Provides capability to generate correspondence and notifications to send to Users.</u>	<u>Discover</u>
<u>C-04</u>	<u>Payments</u>	<u>Online payment capability that safely and securely processes payments.</u>	<u>Engage</u>
<u>C-05</u>	<u>Virtual Assistant</u>	<u>Provides 24/7 support through augmented question and answer functionality.</u>	<u>Discover</u>
<u>C-06</u>	<u>Web Forms</u>	<u>Web form creation and processing capability. Includes a range of form components and validation properties.</u>	<u>Engage</u>
<b>Core Capabilities</b>			
<u>C-10</u>	<u>Assessments</u>	<u>Capability to undertake and manage assessment of registration and search requests.</u>	<u>Action</u>
<u>C-11</u>	<u>Audit and Assurance</u>	<u>Manages and records all processing actions made against a request.</u>	<u>Maintain</u>
<u>C-12</u>	<u>Workflow/Business Rules/Process Orchestration</u>	<u>Execute predefined and customisable Business Rules to enforce legal, policy or other operational decisions.</u>	<u>Action</u>
<u>C-13</u>	<u>Case Management</u>	<u>Collects and consolidates User information in one database</u>	<u>Action</u>
<u>C-14</u>	<u>User Relationship Management</u>	<u>Manages engagement and interactions with Users.</u>	<u>Deliver</u>
<u>C-15</u>	<u>Digitisation</u>	<u>Digitise physical materials through conversion of handwritten or typed text into machine-readable format from a scanned document or image.</u>	<u>Action</u>
<u>C-16</u>	<u>Records Management</u>	<u>Document and records management system that stores documents and decisions made.</u>	<u>Deliver</u>
<u>C-17</u>	<u>Register</u>	<u>Records registrations, their history of changes/interactions, which can be published and searched.</u>	<u>Deliver</u>
<u>C-18</u>	<u>Reporting and Analysis</u>	<u>Provides reporting and insight analytics capabilities across all available data points.</u>	<u>Deliver</u>
<u>C-19</u>	<u>Security</u>	<u>Baked in security controls available as a common capability for use at a MAC Registry level and relevant Component levels.</u>	<u>Maintain</u>
<u>C-20</u>	<u>User Accounts and Profile Management</u>	<u>A secure account accessed via the website that is customised to display and manage User activities. It contains a personalised set of information specific to the User that is accessed within the account.</u>	<u>Discover</u>

<u>ID</u>	<u>COMPONENT</u>	<u>DESCRIPTION</u>	<u>PHASE</u>
<u>C-21</u>	<u>Financial Management</u>	<u>Manage Registrar’s revenues, expenditures, accounts receivables/payables, budget and cash flow monitoring.</u>	<u>Engage</u>
<b><u>Supporting Capabilities</u></b>			
<u>C-31</u>	<u>Anti-duplication</u>	<u>Provides text analysis for asset descriptions to identify similar or matching registrations.</u>	<u>Action</u>
<u>C-32</u>	<u>Quality Management</u>	<u>Enables Registrar to monitor transactions on the register for quality and accuracy.</u>	<u>Maintain</u>

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### Functional Requirements

<u>REQUIREMENT REFERENCE</u>	<u>MAC REGISTRY FUNCTIONAL REQUIREMENTS</u>	<u>RELATIVE IMPORTANCE</u>
<b><u>F1: USER ACCESS</u></b>		
-	<b><u>ACCESS</u></b>	-
<u>F1</u>	<u>1.1</u> A User must transact with the MAC Registry electronically through a web-based entry point and be connected to the MAC Registry to create an account and commence a registration or search transaction.	<u>Highly Important</u>
<u>F1</u>	<u>7.1</u> Some international jurisdictions may require Users from their jurisdiction to access and transact on the MAC Registry through their domestic access points. The MAC Registry will need to provide for these cases by accepting/sending information and data transferred from/to these Entry Points using a set of Business Rules.	<u>Highly Important</u>
<u>F1</u>	<u>1.3</u> Information in the MAC Registry will be stored and presented in a format that supports accessibility tools (screen readers, etc.).	<u>Highly Important</u>
<b><u>MAC REGISTRY ACCOUNT</u></b>		
<u>F1</u>	<u>2.1</u> Interactions between Users (other than Casual Users who only preform one-off searches), their Representatives and the MAC Registry is to occur through the User's Account.	<u>Highly Important</u>
<u>F1</u>	<u>2.2</u> Users can view information about their interactions with the MAC Registry, including any correspondence and billing details.	<u>Highly Important</u>
<u>F1</u>	<u>2.3</u> Users can view details of their transactions, including all information and supporting documentation provided during each transaction.	<u>Highly Important</u>
<u>F1</u>	<u>2.4</u> User can view information on the status of any of their transactions.	<u>Highly Important</u>
<u>F1</u>	<u>2.5</u> Users can view all information about their transactions while being represented and/or assisted by a Representative.	<u>Highly Important</u>
<b><u>LANGUAGES</u></b>		
<u>F1</u>	<u>3.1</u> Users can select their preferred language from the list of Designated MAC Registry Languages.	<u>Highly Important</u>
<u>F1</u>	<u>3.2</u> The Designated MAC Registry Languages can be changed at the request of the Registrar (including to add new Designated MAC Registry Languages).	<u>Highly Important</u>
<u>F1</u>	<u>3.3</u> The MAC Registry can display form content in the language selected by the User from the list of Designated MAC Registry Languages.	<u>Highly Important</u>
<u>F1</u>	<u>3.4</u> The MAC Registry is to include on-screen help text in all Designated MAC Registry Languages.	<u>Highly Important</u>

<b><u>USER REPRESENTATIVE</u></b>			
<u>F1</u>	<u>4.1</u>	<u>The MAC Registry is to allow for a User to nominate and authorise one or more Representatives to transact on the Register on their behalf.</u>	<u>Highly Important</u>
<u>F1</u>	<u>4.2</u>	<u>The MAC Registry is to enable the appointment of a Representative to be a standing or one-off appointment.</u>	<u>Highly Important</u>
<u>F1</u>	<u>4.3</u>	<u>The MAC Registry is to:</u> <u>a. enable the nominated Representative to accept or decline a nomination to act on behalf of a User</u> <u>b. notify the User when the nominated Representative has accepted or declined the nomination.</u>	<u>Highly Important</u>
<u>F1</u>	<u>4.4</u>	<u>A User can:</u> <u>a. withdraw or change a Representative to act on their behalf</u> <u>b. notify the Representative of the withdrawal or change to the authorisation.</u>	<u>Highly Important</u>
<u>F1</u>	<u>4.5</u>	<u>The MAC Registry is to ensure that following the withdrawal of the authorisation no further communication or information relevant or relating to the User is provided or accessible to the Representative previously authorised to assist or act on their behalf.</u>	<u>Highly Important</u>
<u>F1</u>	<u>4.6</u>	<u>The MAC Registry is to ensure that the User can continue accessing all relevant information through their MAC Registry Account.</u>	<u>Highly Important</u>
<u>F1</u>	<u>4.7</u>	<u>The MAC Registry is to ensure that a User can authorise a different Representative to assist them or act on their behalf and have that Representative able to access all information as authorised by the User.</u>	<u>Highly Important</u>
<u>F1</u>	<u>4.8</u>	<u>The MAC Registry can track and report on all appointment changes, by User and by Representative.</u>	<u>Highly Important</u>
<u>F1</u>	<u>4.9</u>	<u>A User can nominate a Representative to receive only select communications on their behalf. This can include circumstances where the Representative has not assisted in the lodgement of the Application.</u>	<u>Highly Important</u>
<u>F1</u>	<u>4.10</u>	<u>The MAC Registry is to allow a User to exclude specific types of information from being sent to the Representative</u>	<u>Highly Important</u>
<u>F1</u>	<u>4.11</u>	<u>A User can view information that has been sent to the Representative.</u>	<u>Highly Important</u>
<u>F1</u>	<u>4.12</u>	<u>A Representative can be authorised to assist or act on behalf of multiple Users.</u>	<u>Highly Important</u>

**F2: INFORMATION MANAGEMENT**

<u>F2</u>	<u>1.1</u>	<u>A User can outline their intent in using the MAC Registry and be presented with service option(s) which match this intent.</u>	<u>Important</u>
<u>F2</u>	<u>1.2</u>	<u>The MAC Registry is to present information on suitable services to the User based on Business Rules provided by the Registrar.</u>	<u>Important</u>
<u>F2</u>	<u>1.3</u>	<u>A User can research information such as eligibility criteria, documentation requirements, terms and conditions, application process, responsibilities.</u>	<u>Highly Important</u>
<u>F2</u>	<u>1.4</u>	<u>A User can ask questions about registration and search processes through a digital assistant.</u>	<u>Highly Important</u>
<u>F2</u>	<u>1.5</u>	<u>A User can access information in either an authenticated or unauthenticated environment in accordance with defined Business Rules.</u>	<u>Highly Important</u>
<u>F2</u>	<u>1.6</u>	<u>The MAC Registry is to provide automated support, including online help content and help pointers during the transaction being undertaken by a User.</u>	<u>Highly Important</u>
<u>F2</u>	<u>1.7</u>	<u>The MAC Registry is to provide the online help content and help pointers in the Designated MAC Registry Languages.</u>	<u>Highly Important</u>
<u>F2</u>	<u>1.8</u>	<u>The MAC Registry is to allow the Registrar to upload and maintain instructional information relating to assessment and decision-making tasks.</u>	<u>Highly Important</u>

### **F3: ACCOUNT REGISTRATION AND IDENTIFICATION**

-		<b><u>USER ACCOUNT REGISTRATION</u></b>	-
<u>F3</u>	<u>1.1</u>	<u>A User can register for an account on the MAC Registry.</u>	<u>Highly Important</u>
<u>F3</u>	<u>1.2</u>	<u>A User can select the type of Account they need to interact with the MAC Registry (e.g., individual user, organisational user, Authorised Third Party Service Provider, etc.).</u>	<u>Highly Important</u>
<u>F3</u>	<u>1.3</u>	<u>The Account Application form is to dynamically update and adjust the information requested based on the User's responses according to the Business Rules determined by the Registrar.</u>	<u>Highly Important</u>
<u>F3</u>	<u>1.4</u>	<u>A User creating an Account can select their contact and privacy preferences.</u>	<u>Highly Important</u>
<u>F3</u>	<u>1.5</u>	<u>Eligible users (determined by Business Rules) can apply to transact with the MAC Registry on credit. These users are required to submit additional information/documents to enable the Registrar to assess and approve the credit application. The Account Registration cannot be completed until the credit application is approved.</u>	<u>Highly Important</u>
<u>F3</u>	<u>1.6</u>	<u>The MAC Registry is to allocate a unique identifier for each new Account that is established on the MAC Registry. User Representatives will be allocated the same unique identifier but supplemented by an appropriate suffix to identify a User Representative where a User has authorised several representatives.</u>	<u>Highly Important</u>

F5	<u>1.7</u>	<u>The MAC Registry can make automated decisions to create accounts based on Business Rules determined by the Registrar. Accounts which include credit applications have additional Business Rules.</u>	<u>Highly Important</u>
F3	<u>1.8</u>	<u>The Registrar can suspend, cancel, or reinstate an account.</u>	<u>Highly Important</u>
F5	<u>1.9</u>	<u>The MAC Registry must record account approval status.</u>	<u>Highly Important</u>
F5	<u>1.10</u>	<u>The MAC Registry allows for a casual user to perform a search for international interests on a Pay as You Go basis without the need to create an account and validate their identity with the MAC Registry if they provide a valid digital contact point (email, SMS) to deliver search results to.</u>	<u>Highly Important</u>
-	<b><u>USER IDENTIFICATION</u></b>		-
F3	<u>2.1</u>	<u>The MAC Registry will validate identity information for all registered Users according to defined Business Rules. Casual Users will not be required to validate their identity but will be required to provide a valid digital contact point (e.g., email, SMS)</u>	<u>Highly Important</u>
F3	<u>2.2</u>	<u>The MAC Registry is to be able to digitally collect identity information from a User.</u>	<u>Highly Important</u>
F3	<u>2.3</u>	<u>The MAC Registry must not retain personal identity information and documents (e.g., Passport or Drivers Licence details) once an identity has been validated.</u>	<u>Highly Important</u>
F3	<u>2.4</u>	<u>The MAC Registry can collect document metadata of identity information.</u>	<u>Highly Important</u>
F3	<u>2.5</u>	<u>The MAC Registry is to ensure any identity information collected meets the Registrar's Identity Framework Principles.</u>	<u>Highly Important</u>
F3	<u>2.6</u>	<u>The MAC Registry is to collect identity information from a User even if all Business Rules are not met and flag "standard met"/" standard not met" accordingly.</u>	<u>Highly Important</u>
F3	<u>2.7</u>	<u>The MAC Registry is to adjust the identity information required based on Business Rules (e.g., an Account to conduct searches only may not require the same level of identity validation as that for registering international interests).</u>	<u>Highly Important</u>
F3	<u>2.8</u>	<u>The MAC Registry is to be extensible to validate against alternate forms of digital identity in the future (e.g., biometric information).</u>	<u>Desirable</u>
F3	<u>2.9</u>	<u>The MAC Registry will validate identity information against Third-Party Identity Service Providers designated by the Registrar or from Contracting State identity systems.</u>	<u>Highly Important</u>
F3	<u>2.10</u>	<u>The MAC Registry is to display the results of the identity validation to Users upon receiving results from third party identity service providers or Contracting State identity systems.</u>	<u>Important</u>
F3	<u>2.11</u>	<u>The MAC Registry is to identify potentially fraudulent identity information submitted by a potential</u>	<u>Desirable</u>

User and flag these attempts (e.g., detect reuse of the same identity information by multiple Users).

#### **MANUAL ASSESSMENT OF ACCOUNT APPLICATION**

<u>F3</u>	<u>3.1</u>	<u>The Registrar can manually assess an application for a user account when an Application includes unique circumstances and/or does not meet standard identity validation requirements as set in the Business Rules.</u>	<u>Highly Important</u>
<u>F3</u>	<u>3.2</u>	<u>The MAC Registry is to provide the Registrar with all relevant information such as reason/s why an automated decision was not made, relevant verification outcomes and analysis necessary to perform a manual assessment of an Account application.</u>	<u>Highly Important</u>
<u>F3</u>	<u>3.3</u>	<u>The Registrar can trigger requests for additional information from a User.</u>	<u>Highly Important</u>
<u>F3</u>	<u>3.4</u>	<u>The MAC Registry is to notify a User and/or their Representative that additional information has been requested through their preferred communication channels.</u>	<u>Highly Important</u>
<u>F3</u>	<u>3.5</u>	<u>The Registrar is to have the capability to impose time limits on responses to requests for information according to Business Rules determined by the MAC Registry Supervisory Authority.</u>	<u>Highly Important</u>
<u>F3</u>	<u>3.6</u>	<u>The MAC Registry is to notify a User when the specified period for responding to a request for information will elapse and once it has elapsed.</u>	<u>Highly Important</u>
<u>F3</u>	<u>3.7</u>	<u>The MAC Registry is to allow additional information requested from a User to be provided through the MAC Registry.</u>	<u>Highly Important</u>
<u>F3</u>	<u>3.8</u>	<u>The MAC Registry is to alert Users, through their preferred channels, when there are outstanding actions for them to perform (e.g., where there is a timeframe to provide the additional information).</u>	<u>Highly Important</u>
<u>F3</u>	<u>3.9</u>	<u>The MAC Registry is to enable Users to request additional time to respond to these requests. The request will be processed in accordance with Business Rules determined by the MAC Registry Supervisory Authority.</u>	<u>Highly Important</u>
<u>F3</u>	<u>3.10</u>	<u>The MAC Registry is to pro-actively update Users as their Application progresses against the specified milestones.</u>	<u>Highly Important</u>
<u>F3</u>	<u>3.11</u>	<u>The MAC Registry is to allow Users to check the status of their Application through their MAC Registry Account.</u>	<u>Highly Important</u>

#### **F4: REGISTRATION, AMENDMENT, DISCHARGE OF INTERNATIONAL INTERESTS BY USERS**

<b>F4</b>	<b><u>1</u></b>	<b><u>A User can register an international interest over an asset.</u></b>	<b><u>Highly Important</u></b>
F4	<u>1.1</u>	<u>The MAC Registry guides the User in completing the required form fields to registering an international interest.</u>	<u>Highly Important</u>
F4	<u>1.2</u>	<u>The fields required and displayed are adapted based on type of international interest or asset. These are set by the Registrar's Business Rules. (For example, some interests cannot be registered without the consent of the owner of the underlying asset, so the User will be presented with a field to enter an email/SMS for the asset owner so the system can trigger a consent request.)</u>	<u>Highly Important</u>
F4	<u>1.3</u>	<u>The MAC Registry validates the data being entered by the User against the set Business Rules and contemporaneously alerts and guides the User where the data being entered is not as expected.</u>	<u>Highly Important</u>
F4	<u>1.4</u>	<u>The User can commence and save an incomplete registration and return to it at a later point in time to edit and/or complete it.</u>	<u>Highly Important</u>
F4	<u>1.5</u>	<u>The MAC Registry triggers an electronic consent request to the owner of the underlying asset over which an interest is being registered. Unless the electronic consent is received the registration of the interest is held in a 'Pending' state</u>	<u>Highly Important</u>
F4	<u>1.6</u>	<u>The User is unable to submit a registration unless all required fields have been completed and the required registration fee has been paid. The required fee can vary based on registration type.</u>	<u>Highly Important</u>
F4	<u>1.7</u>	<u>The MAC Registry is to ensure each payment is linked to an invoice, User, an Application, and a unique identifier.</u>	<u>Highly Important</u>
F4	<u>1.8</u>	<u>The registration is automatically processed, and the MAC Registry is instantaneously updated with the new international interest registration.</u>	<u>Highly Important</u>
F4	<u>1.9</u>	<u>A printable registration certificate is auto generated and saved in the User's Account. The certificate bears the date and time of registration in the Registrar's jurisdiction as well as the User's location. A copy of the registration certificate is also sent electronically to the entity that provided consent to the registration. The User can print and/or send the registration certificate to themselves or other third parties.</u>	<u>Highly Important</u>
F4	<u>1.10</u>	<u>A User can self-generate a report listing all their active/pending/discharged/amended registrations by selecting required data fields from a reporting menu.</u>	<u>Highly Important</u>
<b><u>Amend an international interest</u></b>			
F4	<u>2.1</u>	<u>A User can make amendments to certain fields in one of their existing active registrations. The Business Rules will define which fields can be amended and whether the amendment of any field requires the consent of the owner of the underlying asset or whether a fee is payable.</u>	<u>Highly Important</u>

<u>F4</u>	<u>2.2</u>	<u>A User can make bulk amendments to all or a subset of their active registrations, including assigning or subordinating those registrations to another registered User subject to the consent of that other registered User.</u>	<u>Highly Important</u>
<u>F4</u>	<u>2.3</u>	<u>The User can commence and save an incomplete amendment and return to it at a later point in time to edit and/or complete it.</u>	<u>Highly Important</u>
<u>F4</u>	<u>2.4</u>	<u>An amendment fee may be payable, and the User will not be able to submit the amendment request unless the fee has been paid, and where required, the owner or other party's consent has been received.</u>	<u>Highly Important</u>
<u>F4</u>		<u>A printable registration amendment certificate is auto generated and saved in the User's Account. The certificate bears the date and time of registration in the Registrar's jurisdiction as well as the User's location. A copy of the registration amendment certificate is also sent electronically to the entity that provided consent to the amendment. The User can print and/or send the registration certificate to themselves or other third parties.</u>	<u>Highly Important</u>

#### **Discharge an international interest**

<u>F4</u>	<u>3.1</u>	<u>Registrations are automatically discharged based on a set of Business Rules (e.g., Type A registrations are discharged after the lapse of X years, Type B registrations are discharged after the lapse of Y years).</u>	<u>Highly Important</u>
<u>F4</u>	<u>3.2</u>	<u>A record of the registration and the time and date it was discharged is maintained and remains searchable as a discharged interest.</u>	<u>Highly Important</u>
<u>F4</u>	<u>3.3</u>	<u>A printable notification of the discharge is auto generated and electronically sent to the User and a copy of the notification is also sent to the owner of the asset over which the registration existed. The discharge notification bears the date and time of registration in the Registrar's jurisdiction as well as the User's location.</u>	<u>Highly Important</u>
<u>F4</u>	<u>3.4</u>	<u>A user who owns the registration can change the status of their active registrations as 'discharged' at any point in time but cannot change the status of a 'discharged' registration to an 'active' registration.</u>	<u>Highly Important</u>

#### **F5: SEARCHING FOR INTERNATIONAL INTERESTS BY USERS**

<u>F5</u>	<u>1.1</u>	<u>A search can be performed by a Registered User or a Casual User (Casual users do not have an account with the MAC Registry and do not need to validate their identity other than providing a digital contact point such as a valid email address or cell phone number.)</u>	
<u>F5</u>	<u>1.2</u>	<u>The fields required and displayed are adapted based on type of search being conducted. The required fields are set by the Registrar's Business Rules. (For example, when a search is based on asset description, there may be a series of business rules to narrow the search by requiring input of asset</u>	

		<u>type, sub-type, location, colour, material, manufacturer, country of origin, etc)</u>	
<u>F5</u>	<u>1.3</u>	<u>A fee is payable for the search and the search is automatically executed upon receipt of the fee. The fee amount will depend on the type of search being performed. Registered Users who have an established credit facility with the Registrar can charge the fee against their credit account.</u>	
<u>F5</u>	<u>1.4</u>	<u>A printable search certificate is auto generated and saved in the User's Account if the User is a registered user or is sent to the digital contact point of a Casual User. The certificate bears the date and time of search in the Registrar's jurisdiction as well as the User's location.</u>	
<b><u>F6: AMENDMENT, REMOVAL AND REINSTATEMENT OF REGISTRATIONS BY REGISTRAR</u></b>			
<u>F6</u>	<u>1.1</u>	<u>The Registrar can amend, remove or reinstate a registration based on its own enquiries and/or when an interested party makes a successful amendment demand.</u>	<u>Highly Important</u>
<u>F6</u>	<u>1.2</u>	<u>A notification of the amendment/removal/reinstatement is auto generated and electronically sent to the owner of the registration and a copy of the notification is also sent to the owner of the asset over which the registration existed.</u>	<u>Highly Important</u>
<u>F6</u>	<u>1.3</u>	<u>The public searchability of a record of the Registrar's amendment/removal/reinstatement of a registration will be determined by the Business Rules. Where the record does not become a public searchable record, the event will still be captured in the audit logs and will be viewable and searchable by designated internal staff of the Registrar.</u>	<u>Highly Important</u>
<b><u>F7 COMPLAINTS AND REVIEWS</u></b>			
			-
<u>F7</u>	<u>1.1</u>	<u>The MAC Registry will include a form to enable the electronic submission of complaints, allegations of fraud, tip-offs, and other concerns by Users.</u>	<u>Highly Important</u>
<u>F7</u>	<u>1.3</u>	<u>The MAC Registry will allow related complaints and reviews to be linked by a User.</u>	<u>Highly Important</u>
<u>F7</u>	<u>1.4</u>	<u>Users can upload documents (for example Microsoft Office, PDF, or JPEG) to a case (complaints/reviews/internal reviews) within the MAC Registry.</u>	<u>Highly Important</u>
<u>F7</u>	<u>1.5</u>	<u>A User will receive an automated system notification when their form is received.</u>	<u>Highly Important</u>
<u>F7</u>	<u>1.6</u>	<u>The MAC Registry will allow a User to:</u> <u>a. lodge a request for review within the timeframes specified by the Business Rules</u> <u>b. lodge a request for an extension of time to make a request for review.</u>	<u>Highly Important</u>
<u>F7</u>	<u>1.7</u>	<u>The MAC Registry can manually record review requests and activities/outcomes related to those matters.</u>	<u>Highly Important</u>
<u>F7</u>	<u>1.8</u>	<u>The MAC Registry can collate and provide relevant information to the Registrar in respect of the com-</u>	<u>Highly Important</u>

		<u>plaint or review request. This information may include the Application, supporting information provided by the User, correspondence with the MAC Registry.</u>	
<u>F7</u>	<u>1.9</u>	<u>The MAC Registry can track, and case manage complaints and review requests lodged.</u>	<u>Highly Important</u>
<u>F7</u>	<u>1.10</u>	<u>Users are notified of the outcomes of case activities based on the Business Rules (including timeframes for providing the notification), and subject to legislative requirements.</u>	<u>Highly Important</u>

#### **F8 COMPLIANCE AND ENFORCEMENT**

			-
<u>F8</u>	<u>1.1</u>	<u>Registrar Staff Users designated to conduct compliance activities will login to an authenticated environment.</u>	<u>Highly Important</u>
<u>F8</u>	<u>1.2</u>	<u>Compliance controls can be updated through Business Rules to reflect changes in the Registrar's policy.</u>	<u>Highly Important</u>
<u>F8</u>	<u>1.3</u>	<u>The MAC Registry is to have the capability to provide the Registrar a single view of all information about a User.</u>	<u>Highly Important</u>
<u>F8</u>	<u>1.4</u>	<u>The MAC Registry will have the functionality to search for Users, Representatives and/or Registrations that meet a set of characteristics specified by a Registrar Staff User. The search will be across the MAC Registry's data holdings or a subset of data holdings.</u>	<u>Highly Important</u>
<u>F8</u>	<u>1.5</u>	<u>Registrar Staff Users can perform dynamic, user-customised risk management assessments based on Business Rules.</u>	<u>Important</u>
<u>F8</u>	<u>1.6</u>	<u>The MAC Registry will periodically and automatically generate a priorities report based on several indicators including risk profiles and models, anomalous or non-standard behaviours, fraud flags, tip-offs, etc.</u>	<u>Important</u>
<u>F8</u>	<u>1.7</u>	<u>Designated Registrar Staff Users are to receive a notification when data irregularities are automatically identified by the MAC Registry, based on defined parameters (including risk profiling and workflows).</u>	<u>Highly Important</u>
<u>F8</u>	<u>1.8</u>	<u>Registrar Staff Users with privileged access can search for compliance investigations and actions in the MAC Registry.</u>	<u>Highly Important</u>
<u>F8</u>	<u>1.9</u>	<u>Registrar Staff Users can search for specific words or phrases within the data holdings of the MAC Registry.</u>	<u>Highly Important</u>
<u>F8</u>	<u>1.10</u>	<u>Registrar Staff Users with privileged access can restrict access to case and alleged fraud information to protect a case and/or any informants.</u>	<u>Highly Important</u>
<u>F8</u>	<u>1.11</u>	<u>The MAC Registry includes a field that allows Registrar Staff Users with privileged access to suspend, cancel, or revoke a User Account or Registration due to non-compliance.</u>	<u>Highly Important</u>

F8	1.12	The MAC Registry will record and store historic compliance and complaints/reviews/fraud activities.	Highly Important
<b>F9 REPORTING AND DATA ANALYTICS</b>			-
F9	1.1	The MAC Registry allows Registrar Staff Users to generate reports on 'all fields' from the MAC Registry (controlled by role and access privileges as set by the Registrar).	Highly Important
F9	1.2	The MAC Registry can generate reports for a specified point in time or over a defined period.	Highly Important
F9	1.3	The MAC Registry is to be able to auto-generate specified reports at specified times.	Highly Important
F9	1.4	The MAC Registry is to be able to capture and maintain metadata e.g., field definitions.	Highly Important
F9	1.5	The MAC Registry is to allow the Registrar to link MAC Registry data with data from the Registrar's other business systems (e.g., financial management system, customer relationship management system, etc).	Highly Important
F9	1.6	The MAC Registry can generate reports on revenue from transactions undertaken during specified periods.	Highly Important
F9	1.7	The MAC Registry is to allow Registrar Staff Users to export data to the Registrar's fiscal management information system for reconciliation purposes.	Desirable
F9	1.8	The MAC Registry is to allow Registrar Staff Users to access a library of standard reports and queries in the MAC Registry.	Highly Important
F9	1.9	The MAC Registry is to allow Registrar Staff Users to generate custom and ad-hoc, self-service reports.	Highly Important
F9	1.10	The MAC Registry is to allow Registrar Staff Users to easily access and write queries for ad-hoc reports.	Highly Important
F9	1.11	The MAC Registry is to allow Registrar Staff Users to save new reporting queries in the MAC Registry for future use.	Highly Important
F9	1.12	The MAC Registry is to allow Users to run automated data cleansing on data sets.	Important
F9	1.13	The MAC Registry is to allow Users to export data for use in third party analytics tools.	Highly Important
F9	1.14	The MAC Registry is to track and report on the processing time for individual non-automated User account creation or registration/search transactions requested by users, e.g., the time from lodgement through to notifying a User of the result.	Highly Important
<b>F10 QUALITY ASSURANCE &amp; FRAUD CONTROL</b>			-
F10	1.1	The MAC Registry is to allow Applications to be selected for audit by designated Registrar Staff Users. This is to include selection or referral of specific cases, selection of a random subset of cases or sel-	Highly Important

		<u>ection of a subset of cases based on adjustable parameters, at the registry level and at the Registrar Staff User level.</u>	
<u>F10</u>	<u>1.2</u>	<u>The MAC Registry is to have the ability to search for Users/Applications that meet a set of characteristics specified by the User. The Users/Applications search will be across the MAC Registry's data holdings and where required, utilise MAC Registry APIs (Application Program Interfaces) to search and retrieve Users/Application information from the Registrar's other business system such as a CRM (Customer Relationship Management) or a Financial Management System.</u>	<u>Highly Important</u>
<u>F10</u>	<u>1.3</u>	<u>The MAC Registry is to provide information to support the audit activity. This includes which assessments were made manually and the confidence rating for outcomes of any automated tasks.</u>	<u>Highly Important</u>
<u>F10</u>	<u>1.4</u>	<u>The MAC Registry is to supply information on verification, assessment, and decision steps for individual Applications.</u>	<u>Highly Important</u>
<u>F10</u>	<u>1.5</u>	<u>The MAC Registry will provide the capability to examine and audit, including in Real time, every interaction with the MAC Registry (i.e., every step of every transaction or interaction with the MAC Registry will be collected including deletion of information and material previously entered by Users).</u>	<u>Highly Important</u>

**F11 ENABLERS**

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-		<b><u>REGISTRAR'S WORKFLOW PROCESSING / WORKLOAD MANAGEMENT</u></b>	
<u>F11</u>	<u>1.1</u>	<u>The MAC Registry is to ensure the internal workflow functions according to a hierarchy of Registrar Staff User roles.</u>	<u>Highly Important</u>
<u>F11</u>	<u>1.2</u>	<u>The MAC Registry is to notify Users when a task has been allocated to them.</u>	<u>Highly Important</u>
<u>F11</u>	<u>1.3</u>	<u>The MAC Registry is to ensure the workflow process includes, as a minimum: standardised documentation labelling conventions and storage standards; use of purpose-built templates; clear delegation/sign-off requirements; timestamp and User ID marked on all documents.</u>	<u>Highly Important</u>
<u>F11</u>	<u>1.4</u>	<u>The MAC Registry is to provide workflow management for all functions necessary to register an account, perform a search, create/amend/remove a security interest including capability for preview of any letters/correspondence generated as part of the workflow.</u>	<u>Highly Important</u>
<u>F11</u>	<u>1.5</u>	<u>The MAC Registry is to allow authorised Registrar staff to update the Registrar's organisation structure, delegation rules, responsibilities, and tasks assignment.</u>	<u>Highly Important</u>
<u>F11</u>	<u>1.6</u>	<u>Workflow processes may be triggered because of receiving information from a User or other parties, actions taken by the Registrar's staff or the User, or by other conditions e.g., the expiry of a period.</u>	<u>Highly Important</u>

<u>F11</u>	<u>1.7</u>	<u>The MAC Registry is to allocate tasks for action in accordance with Business Rules determined by the Registrar.</u>	<u>Highly Important</u>
<u>F11</u>	<u>1.8</u>	<u>Designated Registrar Staff can check that jobs are actively progressing through the defined processing workflow and have not become stalled, lost, or incorrectly work flowed.</u>	<u>Highly Important</u>
<u>F11</u>	<u>1.9</u>	<u>The MAC Registry is to automatically provide Registrar Staff Users with the information required to perform their allocated task(s).</u>	<u>Highly Important</u>
<u>F11</u>	<u>1.10</u>	<u>The MAC Registry is to allow Registrar Staff Users to refer individual tasks to other Registrar Staff Users (e.g., allowing to refer an Application to a specialist or a supervisor).</u>	<u>Highly Important</u>
-	<b><u>SYSTEM UPDATES</u></b>		-
<u>F11</u>	<u>2.1</u>	<u>The MAC Registry will allow for parameters to be amended and adjusted to accommodate practice, policy, and legislative changes.</u>	<u>Highly Important</u>
<u>F11</u>	<u>2.2</u>	<u>The MAC Registry will be able to notify third parties of upcoming MAC Registry updates including any proposed system outages.</u>	<u>Highly Important</u>
<u>F11</u>	<u>2.3</u>	<u>The MAC Registry is to ensure access and standard functionalities are not interrupted when the system updates are being tested.</u>	<u>Highly Important</u>
<u>F11</u>	<u>2.4</u>	<u>The MAC Registry is to notify the Registrar's designated staff of errors relating to the functionality of the system and completion of workflows based on Business Rules.</u>	<u>Highly Important</u>
<u>F11</u>	<u>2.5</u>	<u>The MAC Registry is to have the ability to be reflected in a testing environment including population of appropriate sample data.</u>	<u>Highly Important</u>
-	<b><u>FORMS CAPABILITY</u></b>		-
<u>F11</u>	<u>3.1</u>	<u>The MAC Registry is to allow online forms to include mandatory fields.</u>	<u>Highly Important</u>
<u>F11</u>	<u>3.2</u>	<u>The MAC Registry is to allow online forms to include validation elements (e.g., address look-up, case sensitivity, identifies overlaps and duplicate entries, location lists and drop-down boxes).</u>	<u>Highly Important</u>
<u>F11</u>	<u>3.3</u>	<u>The MAC Registry is to enable online forms to be configured by the Registrar without the need for specialised development.</u>	<u>Highly Important</u>
<u>F11</u>	<u>3.4</u>	<u>The MAC Registry is to support the pre-population of online forms with existing system data.</u>	<u>Highly Important</u>
<u>F11</u>	<u>3.5</u>	<u>The MAC Registry is to be able to tailor the experience for Users of forms (i.e., only showing information or questions relevant to the application being submitted).</u>	<u>Highly Important</u>
<u>F11</u>	<u>3.6</u>	<u>The MAC Registry is to ensure the provision of forms is compliant with the World Wide Web Consortium's (W3C) Web Content Accessibility Guidelines (WCAG) 2.0 at the AA level of conformation.</u>	<u>Highly Important</u>

<b>RECORDS MANAGEMENT</b>			
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<u>F11</u>	<u>4.1</u>	<u>The MAC Registry is to enable the implementation of a records management and archiving strategy that is approved by the Registrar and is in accordance with the policy of the jurisdiction from which the registry operates.</u>	<u>Highly Important</u>
<u>F11</u>	<u>4.2</u>	<u>The MAC Registry is to allow integration with the Registrar's document and records management systems (if a separate system exists).</u>	<u>Highly Important</u>
<b>RULES BASED ENGINE</b>			
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<u>F11</u>	<u>5.1</u>	<u>The MAC Registry allows designated Registrar Staff Users to adjust Business Rules which affect automated processing (in accordance with the Registrar's established processes and necessary authorisation from the Supervisory Authority).</u>	<u>Highly Important</u>
<u>F11</u>	<u>5.2</u>	<u>The MAC Registry allows designated Registrar Staff Users to change automated risk thresholds, the approach to data collection, data verification and assessments.</u>	<u>Highly Important</u>
<u>F11</u>	<u>5.3</u>	<u>The MAC Registry is to keep records of all changes made to the Business Rules, including who undertook the change and the date and time it was made.</u>	<u>Highly Important</u>
<u>F11</u>	<u>5.4</u>	<u>The MAC Registry is to enable approval-based rules for promotion of Business Rules from testing to production.</u>	<u>Highly Important</u>
<b>CORRESPONDENCE</b>			
-			-
<u>F11</u>	<u>6.1</u>	<u>The MAC Registry is to either automatically send correspondence to a User or present the correspondence to relevant Registrar Staff Users for review, in accordance with Business Rules determined by the Registrar.</u>	<u>Highly Important</u>
<u>F11</u>	<u>6.2</u>	<u>The MAC Registry is to allow Registrar Staff Users to edit the content of correspondence presented to them for review and prior to being sent (and record any changes and their justification).</u>	<u>Highly Important</u>
<u>F11</u>	<u>6.3</u>	<u>The MAC Registry is to keep an audit record of when a Registrar Staff User edits the content of correspondence and what has been changed.</u>	<u>Highly Important</u>
<u>F11</u>	<u>6.4</u>	<u>The MAC Registry is to send formal correspondence to a User to their MAC Registry Account.</u>	<u>Highly Important</u>
<u>F11</u>	<u>6.5</u>	<u>The MAC Registry is to send notification of correspondence to a User through their preferred digital communication channel(s).</u>	<u>Highly Important</u>
<u>F11</u>	<u>6.6</u>	<u>The MAC Registry is to notify a User or the Representative acting on their behalf when the specified period for responding to correspondence will elapse and once it has elapsed.</u>	<u>Highly Important</u>
<b>SEARCH</b>			
-			-

<u>F11</u>	<u>7.1</u>	<u>The MAC Registry's search functionality is not to be case sensitive.</u>	<u>Highly Important</u>
<u>F11</u>	<u>7.2</u>	<u>The MAC Registry's search functionality is to allow the selection of multiple parameters.</u>	<u>Highly Important</u>
<u>F11</u>	<u>7.3</u>	<u>Search results is to return matches in fields and documents.</u>	<u>Highly Important</u>
<u>F11</u>	<u>7.4</u>	<u>The MAC Registry's search functionality is to allow search results to be ordered based on attributes (e.g., most recent, most relevant).</u>	<u>Highly Important</u>

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### Non-functional Requirements

The non-functional requirements set out the specific quality requirements of the MAC Registry. The non-functional requirements do not limit any of the other requirements of the Agreement.

<u>MAC REGISTRY NON-FUNCTIONAL REQUIREMENTS</u>	<u>Relative Importance</u>
<p><u>1</u>    <b>Scalability</b> – The MAC Registry is to scale elastically in response to demand and remain functional and available to Users regardless of dynamic changes in transaction volume, batch and background, number of Users.</p>	<u>Highly Important</u>
<p><u>2</u>    <b>Availability and Reliability</b> - The MAC Registry is to support continual operations by being available and functioning with minimal downtime.</p> <p>[Guidance to Tenderers: As a baseline expectation the MAC Registry can expect to support most Use Cases to 99.9% uptime for Users, excluding scheduled downtime and to have to have no more than 12 scheduled outages in a year, which last no longer than 12 hours in total.</p> <p>The MAC Registry is to monitor its performance and health and should have the ability to rectify issues with the operation of itself with little or no human intervention</p> <p>The MAC Registry should have comprehensive event management plan which addresses the entire event lifecycle (including event occurrence, event notification, event detection, event logging, event filtering and correlation), and event response.]</p>	<u>Highly Important</u>
<p><u>3</u>    <b>Efficiency</b> - The MAC Registry is to provide adequate response times for all Users. The MAC Registry is to be designed, developed, and deployed in such a manner that response times are always achieved, including during peak periods of User activity (for example higher demand due to trade, holiday, and seasonal cycles).</p> <p>[Guidance to Tenderers: As a baseline expectation the MAC Registry can expect to support a minimum response time of 3 seconds in 90% of transaction types. Additionally, users are to be able to access key Components of the MAC Registry where there is limited internet connectivity or mobile telecommunications coverage. For example, providing the ability to access registration services through a basic HTML view even if more sophisticated services such as chatbots are not viable.]</p>	<u>Highly Important</u>

<b><u>MAC REGISTRY NON-FUNCTIONAL REQUIREMENTS</u></b>	<b><u>Relative Importance</u></b>
<p><b><u>4</u></b> <b><u>Data Governance &amp; Data Ownership</u></b> - The MAC Registry is to be designed and built according to the data governance requirements of the jurisdiction in which the Registrar is based. Subject to the requirements of the Registrar's jurisdiction, the Supervisory Authority who may be based in a different jurisdiction will retain all rights, title, and interest in data inputted by Users into the MAC Registry or created by the MAC Registry.</p> <p>[Guidance to Tenderers: The MAC Registry should be built so that it can support a change in jurisdiction of the hosting Registrar and/or changes in data governance policies in the jurisdiction of the incumbent hosting Registrar.</p> <p>The Successful Tenderer is to ensure all rights, title and interest in data collected, created, or modified by the MAC Registry, including data inputted by Users into the MAC Registry, is retained by, or assigned to the MAC Registry Supervisory Authority].</p>	<u>Highly Important</u>
<p><b><u>5</u></b> <b><u>Compatibility</u></b> - The MAC Registry is to support a seamless User experience</p> <p>[Guidance to Tenderers: The MAC Registry is to function for Users across a range of operating systems and devices (including laptops, personal computers, and mobile devices such as cell phones and tablets).]</p>	<u>Highly Important</u>
<p><b><u>6</u></b> <b><u>Accessibility</u></b> - The MAC Registry is to be compliant with the Web Content Accessibility Guidelines (WCAG).</p> <p>[Guidance to Tenderers: As a baseline expectation the MAC Registry is to be compliant with or exceed the minimum Web Content Accessibility Guidelines (WCAG) Level 2.0. It can expect to operate across a range of internet browsers on devices to ensure that the browsers used by at least 97 per cent (in aggregate) of potential Users and Users in key locations are supported at any given point in time. In the event a new major version of the WCAG is released, is to at a minimum be compliant with the major version released immediately prior to the latest major version.]</p>	<u>Highly Important</u>

<b>MAC REGISTRY NON-FUNCTIONAL REQUIREMENTS</b>		<b>Relative Importance</b>
<b>7</b>	<p><b><u>Security Controls, Security Architecture and Compliance</u></b> - The MAC Registry is to support security controls and its security architecture is driven by sound risk assessments that reflect the value and sensitivity of the digital assets and data that are being protected, as well as the threats to the MAC Registry.</p> <p>[Guidance to Tenderers: The MAC Registry is to adhere to all relevant security policies, standards, and frameworks. It should be designed with an architecture that can adapt to future security policies, standards or frameworks that are enacted during the term of any Contract. This includes design:</p> <ul style="list-style-type: none"> <li>• <u>using risk and threat model driven design and in accordance with .....</u></li> <li>• <u>to defend against deliberate malicious actions and continue to function as intended in a trustworthy, dependable, and reliable manner in the event of deliberate attack or partial compromise.</u></li> <li>• <u>so that failure or inadequacy of preventative controls will be detected, and response controls are in place to detect and contain the impact of failure.</u></li> <li>• <u>to support defence-in-depth protection and layers of diverse security controls so that any one control failure will not result in a complete loss of security.</u></li> <li>• <u>to harden and have resilience in the face of deliberate attack including ability to resist and defend against elevated level motivated nation state threat actors and trusted insiders.</u></li> <li>• <u>with mechanisms (audit, access logging) which enable Users to be held accountable for their actions.</u></li> <li>• <u>to support the use of contemporary cyber security practices such as security as code, compliance as code, SecDevOps and continuous posture management.</u></li> <li>• <u>to provide end-to-end security monitoring and provide secure security log feeds and security telemetry to the Registrar.</u></li> <li>• <u>to process payments securely, complying with the industry standard Payment Card Industry Data Security Standard (CI-DSS).]</u></li> </ul>	Highly Important
<b>8</b>	<p><b><u>Branding</u></b> - Externally (public facing) Components of the MAC Registry is to include relevant branding.</p> <p>[Guidance to Tenderers: The MAC Registry should be able to adapt to any changes in branding requirements.]</p>	Highly Important
<b>9</b>	<p><b><u>Access Security</u></b> - Access to the MAC Registry is to be restricted to authorised Users and the MAC Registry is to be required to ensure safeguards against deliberate, intrusive and/or unauthorised access from internal and external sources.</p>	Highly Important
<b>10</b>	<p><b><u>Audit of Operations</u></b> -The MAC Registry is to be able to trace activities and provide information necessary for the Registrar and the Supervisory Authority to audit the MAC Registry's operations.</p>	Highly Important
<b>11</b>	<p><b><u>Business Continuity</u></b> - The MAC Registry is to support a disaster recovery and business continuity capability, such that if there is a disaster at the primary location, the MAC Registry can continue operations from a secondary site for business continuity purposes, with Business Continuity Plans maintained throughout the term of any Contract.</p>	Highly Important

<b><u>MAC REGISTRY NON-FUNCTIONAL REQUIREMENTS</u></b>		<b><u>Relative Importance</u></b>
<b><u>12</u></b>	<p><b><u>Disaster Recovery</u></b> - The MAC Registry is to support a disaster recovery and business continuity capability, including a backup located in a different jurisdiction to the MAC Registry, consistent with the sovereignty requirements of the jurisdiction in which the Registrar is based.</p> <p>[Guidance to Tenderers – As a baseline expectation the MAC Registry can expect to have a:</p> <ul style="list-style-type: none"> <li>• <u>Recovery Time Objective (RTO) of less than 4 hours and a Recovery Point Objective (RPO) of less than 15 minutes for User-facing functionality.</u></li> <li>• <u>RTO of less than 8 hours and a RPO of less than 15 minutes, with the Commission’s expectation as it relates to RTO and RPO for the non-User facing functionality.]</u></li> </ul>	<u>Highly Important</u>
<b><u>13</u></b>	<p><b><u>Documentation</u></b> - Documentation relating to the design and operation of the MAC Registry is to be available to the Registrar and the Supervisory Authority, with the Successful Tenderer to maintain documentation relating to the design and operation of the MAC Registry in its entirety and be able to provide it to MAC Registry Supervisory Authorities as requested.</p>	<u>Highly Important</u>
<b><u>14</u></b>	<p><b><u>Risk Management</u></b> - The MAC Registry is to include a systematic and stringent approach to managing risk, as well as an ability to prevent and detect fraud.</p> <p>[Guidance to Tenderers: The MAC Registry is to be managed in accordance with the Risk Management Standard ISO 31000:2018. The response should describe:</p> <ol style="list-style-type: none"> <li>a. <u>how the system design will identify, seek to prevent and manage risks</u></li> <li>b. <u>the level of conformance to recognised standards for risk management.</u></li> <li>c. <u>criteria for identifying and managing risks, including descriptions of likelihood and consequence criteria</u></li> <li>d. <u>how risks will be categorised, and appropriate risk treatment strategies applied</u></li> </ol>	<u>Highly Important</u>
<b><u>15</u></b>	<p><b><u>Incident Management</u></b> - An Incident Management Strategy is to be implemented to ensure Incidents are resolved in a timely and efficient manner, with a comprehensive Incident Management Strategy for production Incidents (also referred to as defects).</p>	<u>Highly Important</u>
<b><u>16</u></b>	<p><b><u>Technology Improvement and Innovation</u></b> - The MAC Registry is to support adoption of, over the term of the Contract, technological innovations that become available that could improve the way the MAC Registry achieves the outcomes and requirements specified. This could include, for example, changes that drive efficiency or improve the User experience. These innovations are over and above the upgrades required to ensure software deployed as part of the MAC Registry remains current.</p>	<u>Highly Important</u>

**MAC REGISTRY NON-FUNCTIONAL REQUIREMENTS****Relative Im-  
portance**

- 
- 17** **Interfaces with external systems** - The MAC Registry is to support the management of interfaces through an Application Programming Interface (API) gateway, event messaging platform or other integration mechanisms as directed.
- [Guidance to Tenderers: Interfaces with other systems could include:
- Client Management Systems
  - Financial Management Systems
  - Records Management Systems
  - Reporting and Business Intelligence Management Systems
  - Service Desk Management Systems
  - Payment Gateways
  - Business Registers of international jurisdictions
  - Collateral Registries of international jurisdictions
  - Identity Management Systems of international jurisdictions]
- 
- 18** **Open Source** - The MAC Registry is to actively leverage open-source software to produce a capability that can deliver broader reuse and value for money. This may include incorporating open-source software components together with proprietary software components.
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**ANNEX 4****ILLUSTRATIVE MODEL OF A POSSIBLE LAYOUT OF AN INTERNATIONAL  
REGISTRY REGISTRATION FORM**

All fields must be completed unless otherwise indicated

**[To be revised dependent on the identification criteria]<sup>39</sup>**

**Creditor:**

**Name:**

**Address:**

**Email address:**

**Debtor:**

**Name:**

**Address:**

**State of location at time of creation of interest  
at time of application for registration of interest:**

**Email address:**

**Registry User entity:**

**Name:**

**Address:**

**Email address:**

**Electronic signature:**

**MAC Asset - mandatory information**

**Manufacturer's serial number:**

**Manufacturer's generic model designation:**

**Manufacturer's contract reference number**

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<sup>39</sup> To be updated before publication along the latest version of the Regulations.

**Security Interest:****Date:****Type of interest (prospective or full international interest):****Duration of registration (if not unlimited):**

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**MAC REGISTRY REGULATIONS**

**[to be inserted at the time of approval]**

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**ANNEX 5****PAPER ON BEST PRACTICES TO BE FOLLOWED IN THE DESIGN AND OPERATION  
OF AN INTERNATIONAL COLLATERAL REGISTRY**

(to be inserted once finalised)

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**APPENDIX A****IDENTIFICATION OF THE TENDERER**

(Each tenderer, including subcontractor(s) and member of a consortium or grouping, must complete and sign this identification form)

**Invitation to preliminary offer for selection of the Registrar for the MAC Protocol  
(additional documents may be annexed for clarification)**

<b>Identity</b>	
Name of the Tenderer/Consortium or Group Member/Subcontractor	
Legal status of the Tenderer/Consortium or Group Member/Subcontractor	
For members of Consortia/Groups: Function within the consortium/group and level of control/decision making powers	
Date of registration	
Country of registration	
Registration number	
VAT number	
Description of statutory social security cover (at the level of the country of registration) and non-statutory cover (supplementary professional indemnity insurance) <sup>1</sup>	
<b>Address</b>	
Address of registered office of Tenderer/Consortium or Group Member/Subcontractor	
Where appropriate, administrative address of Tenderer/Consortium or Group Member/Subcontractor for the purpose of this RFP	

<sup>1</sup> For natural persons

<b>Contact Person</b>	
Surname: First name: Title (e.g. Dr, Mr, Ms) : Position (e.g. manager): Telephone number: Fax number: E-mail address:	
<b>Legal Representatives</b>	
<b>Names and function of legal representatives</b> and of other representatives of the Tenderer/Consortium or Group Member/Subcontractor who are authorized to sign contracts with third parties	
<b>Declaration by an authorised representative of the organisation<sup>2</sup></b>	
I, the undersigned, certify that the information given in this preliminary offer is correct and that the offer is valid.	
Surname: First name:	Signature (and Stamp):

<sup>2</sup> This person must be included in the list of legal representatives; otherwise the signature on the offer will be invalidated.

**APPENDIX B****FINANCIAL AND ECONOMIC CAPACITY TABLE OF ANSWERS****Invitation to preliminary offer for selection of the Registrar for the MAC Protocol**

(Each tenderer and member of a consortium/grouping, must complete and sign this table of answers)

<b>Currency : EURO or US-Dollar<sup>1</sup></b>	<b>Figures</b>		
	<b>N* (* most recent figures available)</b>	<b>N-1 year</b>	<b>N-2 years</b>
<b>Total Balance Sheet</b>			
TRADE DEBTORS <i>Amounts due by commercial customers</i>			
CAPITAL and RESERVES (Equity) <i>Amounts owned by the company</i>			
TRADE CREDITORS <i>Amounts due to commercial suppliers</i>			
SHORT TERM DEBT			
LONG TERM DEBT			
LIQUIDITY <i>Bank accounts, cash at hand</i>			
<b><u>About PROFIT &amp; LOSS</u></b>			
OVERALL TURNOVER			
TURNOVER related to services relevant for the offer			
ORDINARY RESULT			
EXTRAORDINARY RESULT			

<sup>1</sup> For equal assessment of capacities figures in US-Dollar will be converted in Euro, applying the conversion rate of the European Central Bank at the deadline for the preliminary offer to be submitted according to the RFP.

INCOME TAX			
NET RESULT			
<b>Name, Position, Date, Signature (and Stamp)</b>			

**Any data considered of vital relevance for the organisation and/or for the understanding of the above figures may be added.**

Comments: Please explain BRIEFLY important variations from one year to another if any. In case of negative equity or repeated losses, please explain how the future of the organisation will be ensured.

**PLEASE ATTACH WITH CLEAR REFERENCE TO THIS ANNEX:**

- a full copy of the **tenderer's (including consortium/group members') annual accounts** (balance sheet, profit and loss account, notes on the accounts and auditors' remarks when applicable,
- a statement of general turnover and specific turnover relating to the relevant services of the **last three years**, as approved by the competent body of the company and, where applicable, audited and/or published.

If, for some exceptional reason which the Preparatory Commission considers justified, a tenderer is unable to provide one or other of the above documents, the tenderer may prove its economic and financial capacity by any other document which the Preparatory Commission considers appropriate. In any case, the Preparatory Commission must at least be notified of the exceptional reason and its justification in the offer. The Preparatory Commission reserves the right to request any other document enabling it to verify the tenderer's economic and financial capacity.

## APPENDIX C

**DECLARATION OF HONOR ON  
EXCLUSION CRITERIA AND ABSENCE OF CONFLICTS OF INTEREST**

**Invitation to preliminary offer for selection of the Registrar for the MAC Protocol**

(Each tenderer, including subcontractor(s) and any member of a consortium or grouping, must complete and sign this Declaration of Honor)

*(Complete or delete the parts in grey italics in parentheses)*  
[Choose options for parts in grey between square brackets]

The undersigned (*insert name of the signatory of this form*):

in [his][her] own name (*for a natural person*)

or

representing the following legal person: (*only if the economic operator is a legal person*)

full official name:

official legal form:

full official address:

VAT registration number:

➤ declares that [the above-mentioned legal person][he][she] is not in one of the following situations:

- (a) is bankrupt or being wound up, is having its affairs administered by the courts, has entered into an arrangement with creditors, has suspended business activities, is the subject of proceedings concerning those matters, or is in any analogous situation arising from a similar procedure provided for in national legislation or regulations;
- (b) has been convicted of an offence concerning professional conduct by a judgment of a competent authority of a state which has the force of *res judicata*;
- (c) has been guilty of grave professional misconduct proven by any means which the Supervisory Authority can justify including by decisions of international organisations;
- (d) is not in compliance with all its obligations relating to the payment of social security contributions and the payment of taxes in accordance with the legal provisions of the country in which it is established, and with those of the country of the Supervisory Authority;
- (e) has been the subject of a judgement which has the force of *res judicata* for fraud, corruption, involvement in a criminal organisation, money laundering or any other illegal activity, where such activity is detrimental to the Supervisory Authority's financial interests;
- (f) is a subject of an administrative penalty for being guilty of misrepresentation in supplying the information required by the Supervisory Authority as a condition of participation in a procurement procedure or failing to supply this information, or having been declared to be in serious breach of its obligations under contracts covered by the the Supervisory Authority and any international organisation or any State party to the Convention.

- (Only for legal persons, otherwise delete) declares that the natural persons with power of representation, decision-making or control<sup>1</sup> over the above-mentioned legal entity are not in the situations referred to in b) and e) above;
- declares that [the above-mentioned legal person][he][she]:
  - (g) has no conflict of interest in connection with the contract; a conflict of interest could arise in particular as a result of economic interests, political or national affinity, family, emotional life or any other shared interest;
  - (h) will, throughout the tendering procedure and the term of the contract, inform the Supervisory Authority, without delay, of any situation considered a conflict of interest or which could give rise to a conflict of interest;
  - (i) has not granted and will not grant, has not sought and will not seek, has not attempted and will not attempt to obtain, and has not accepted and will not accept any advantage, financial or in kind, to or from any party whatsoever, where such advantage constitutes an illegal practice or involves corruption, either directly or indirectly, inasmuch as it is an incentive or reward relating to award of the contract;
  - (j) provided accurate, sincere and complete information to the Supervisory Authority within the context of this tendering procedure;

In case of award of contract, the following evidence shall be provided upon request and within the time limit set by the Supervisory Authority:

For situations described in (a), (b) and (e), production of a recent extract from the judicial record is required or, failing that, a recent equivalent document issued by a judicial or administrative authority in the country of origin or provenance showing that those requirements are satisfied. Where the tenderer is a legal person and the national legislation of the country in which the tenderer is established does not allow the provision of such documents for legal persons, the documents should be provided for natural persons, such as the company directors or any person with powers of representation, decision making or control in relation to the tenderer.

For the situation described in point (d) above, recent certificates or letters issued by the competent authorities of the State concerned are required. These documents must provide evidence covering all taxes and social security contributions for which the tenderer is liable, including for example, VAT, income tax (natural persons only), company tax (legal persons only) and social security contributions.

For any of the situations (a), (b), (d) or (e), where any document described in two paragraphs above is not issued in the country concerned, it may be replaced by a sworn or, failing that, a solemn statement made by the interested party before a judicial or administrative authority, a notary or a qualified professional body in his country of origin or provenance.

If the tenderer is a legal person, information on the natural persons with power of representation, decision making or control over the legal person shall be provided only upon request by the Supervisory Authority.

Full name

Date

Signature (and Stamp)

<sup>1</sup> This covers the company directors, members of the management or supervisory bodies, and cases where one natural person holds a majority of shares.