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International Labour Standards Department
Sectoral Activities Programme

**Consultations on the Seafarers' Identity
Documents Convention (Revised), 2003
(No. 185)**

Background paper

Geneva, 23–24 September 2010

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Purpose of the consultations

1. The Seafarers' Identity Documents Convention (Revised), 2003 (No. 185), is now beginning to develop in the manner envisaged by the International Labour Conference when it was adopted seven years ago. The purpose of the present consultations is to have an exchange of views between governments of member States that have ratified or are seriously considering ratification of Convention No. 185, together with the international organizations representing shipowners and seafarers, on any implementation problems that may have arisen and on ways of enabling the Convention to achieve its objectives. The participation of other interested governments would also be welcome. An important subject to be discussed will be the proposals for improving the technical aspects of the Convention's implementation made recently by ISO–IEC JTC 1, a joint technical committee of the International Organization for Standardization (ISO) and the International Electrotechnical Commission (IEC).¹
2. It will be recalled that Convention No. 185 was adopted in 2003, by a fast-track procedure following the events of 11 September 2001, to replace the 45-year-old Seafarers' Identity Documents Convention, 1958 (No. 108). After initial discussions in the International Maritime Organization (IMO) on improved security measures for the maritime industry, a decision was taken at the 283rd Session (March 2002) of the Governing Body to place on the agenda of the 91st Session (2003) of the International Labour Conference an item on "improved security of seafarers' identification" with a view to the adoption of a Protocol to Convention No. 108 or other instrument, and Convention No. 185 was adopted by the Conference 15 months later. It has now been ratified by 18 ILO member States: Albania, Azerbaijan, Bahamas, Bosnia and Herzegovina, Brazil, France, Hungary, Indonesia, Jordan, Kazakhstan, Republic of Korea, Madagascar, Republic of Moldova, Nigeria, Pakistan, Russian Federation, Vanuatu and Yemen. One other ILO Member, Lithuania, has made a declaration of provisional application.

Development of Convention No. 185

Developments to date

3. The main purpose of Convention No. 185 – to facilitate the temporary admission of genuine seafarers to foreign territory for shore leave and for transit, transfer or repatriation – is similar to that of Convention No. 108, as are the actual facilities to be granted to seafarers in that respect. Extensive innovations in Convention No. 185 relate to the introduction of modern security features in the materials used for the new seafarers' identity document (SID), its biometric features (the fingerprint template and the photograph) and the means of facilitating verification of the SID (uniformity and machine readability). They also concern minimum requirements for issuance processes and procedures, including quality control, national databases and permanently available national focal points to provide information to border authorities; and a system of international oversight to ensure that ratifying countries comply with those requirements.

¹ See document GB.306/17/3.

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4. At the time the Convention was adopted, however, the International Labour Conference realized that several aspects still needed to be developed before it could be fully operational. Those aspects formed the subject of a number of resolutions.²

Resolution concerning technical cooperation relating to seafarers' identity documents

5. In this resolution, the International Labour Conference noted that the success of the Convention would “depend upon the availability in each ratifying Member of the necessary technology, expertise and material resources for the preparation and verification of the new, secure SID, established by the Convention, and for the related database and issuance processes”. The resolution not only referred to the use of resources allocated to the Organization’s technical cooperation programme, but also urged ILO Members to agree among themselves on measures of cooperation which would “enable them to share their technology, expertise and resources, where appropriate, [and] provide for countries with advanced technology and processes to assist Members that are less advanced in those areas”.
6. One important example of an agency of a country with advanced technology assisting less advanced Members occurred in 2004, when the United States Trade and Development Agency (USTDA) financed a large-scale feasibility study that enabled an ILO Member to ratify the Convention. The USTDA also provided similar assistance to another country which is close to ratification. Concerning the sharing of technology, expertise and resources, the Office was informed that discussions had taken place among Members with small numbers of seafarers. As for technical cooperation from the Office, in 2006 a subregional community was given advice with a view to the establishment of an issuance system for its members; and assistance was provided to three countries that had ratified the Convention to ensure compliance of their SIDs with the Convention. The Office has also responded to inquiries from other governments concerning compliance of their prospective SIDs. During the present consultations, participants may be able to provide other examples of relevant cooperation, together with advice on any areas in which international cooperation would appear particularly useful.

Resolution concerning the establishment of a list of member States complying with the Seafarers' Identity Documents Convention (Revised), 2003

7. In the above resolution, the International Labour Conference requested the ILO Governing Body to make the arrangements referred to in Article 5, paragraph 6, of the Convention for approving a list of countries which fully met the requirements of the Convention. In 2005, the Governing Body approved the *Arrangements concerning the list of Members which fully meet the minimum requirements concerning processes and procedures for the issue of seafarers' identity documents*. They require the establishment of a Review Group and a Special Review Board, each consisting of two Government representatives, one Shipowner representative and one Seafarer representative. They furthermore require any ILO Member that has ratified the Convention and wishes to be included on the list to submit to the International Labour Office:

² The Conference also adopted a resolution concerning decent work for seafarers, which underlined the critical importance of access to shore leave and the facilitation of transit for seafarers.

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- (a) a statement in electronic form outlining the processes and procedures that are in place to achieve the mandatory results referred to in Part A of Annex III of the Convention;
 - (b) a copy, also in electronic form, of the report on the first independent evaluation carried out by the Member in accordance with paragraph 4 of Article 5 of the Convention; and
 - (c) a specimen of the SID issued by the Member.
8. The Office must then arrange for an independent expert review of the submitted documentation and comments from seafarers' organizations, shipowners' organizations and other ratifying Members. It will then pass on to the Review Group copies of the documentation, expert advice and comments, along with "the Office's assessment of the adequacy of the independent evaluation report as well as the Office's conclusions as to whether or not the Member concerned fully meets the Minimum Requirements". The Review Group will consider the documents provided by the Office and make a recommendation to the Governing Body as to whether or not the minimum requirements have been fully met. The Member must be given a chance to correct any shortcomings and, in the event that the Group cannot reach a consensus, the Special Review Board will consider the documents and make a recommendation. The Governing Body will then take the final decision as to whether or not the Member concerned has fully met the minimum requirements and should be added to the list.
9. The Office intends to invite the Governing Body to establish the Review Group and the Special Review Board at its November 2010 session.³ Although the independent evaluations are required by Article 5, paragraph 4, of the Convention, no Members have submitted the abovementioned documentation to the Office yet. Specimen documents from any Member that has ratified the Convention and begun to issue SIDs should be available, but the outline of the processes and procedures and the independent evaluation report may take some time to prepare. The entity performing the evaluation needs to be independent of the government concerned and of any commercial entities that may have supplied technology for the SID system. It needs to have a sufficiently detailed knowledge of the technical requirements of Convention No. 185 for the Office and the Review Group to be able to rely on its report. Typically, the electronic statement outlining policies and procedures needs to be prepared before an independent evaluation is arranged, as it will form the basis of that evaluation. One or more representatives of the entity performing the evaluation will then need to visit the site or sites where seafarers are enrolled in the system, where the national electronic database is stored, the SIDs are printed, the focal point to be designated by each ratifying Member in accordance with Article 4, paragraph 4, of the Convention is maintained, and so on. The report should then be submitted to the International Labour Office, after any issues found during the evaluation have been resolved. Now that the Review Group and Special Review Board are about to be established, those Members that have ratified Convention No. 185 may wish to begin preparing the outline of their policies and procedures and arranging for an independent evaluation of their SID systems. In some cases, they should do so as a matter of urgency in view of the fact that Article 5, paragraph 4, gives them a maximum time limit of five years to carry out the evaluation.

³ See document GB.307/16/7, para. 5.

Resolution concerning the development of the global interoperable biometric

10. At the time of the adoption of Convention No. 185 in 2003, the use of a globally interoperable biometric identity document was a rather novel idea. Standards for ePassports were still under development and the international standardization of biometrics in particular was at a very early stage. The International Labour Conference therefore requested the Director-General to “take urgent measures for the development by the appropriate institutions of a global interoperable standard for the biometric template adopted in the framework of the Seafarers’ Identity Documents Convention (Revised), 2003, particularly in cooperation with the International Civil Aviation Organization”. The International Labour Office convened a meeting to deal with this matter in September 2003, and invited representatives from the International Civil Aviation Organization (ICAO) and the ISO, which had assisted the ICAO with the technical work involved in producing ICAO Document 9303 (cited in the Convention). The ICAO and ISO representatives confirmed the importance of using a global standard to ensure interoperability, but the ICAO did not itself have the resources to lend assistance with this. The ISO was able to offer assistance, but only through the normal standards development process, in which a standard can take four or five years to produce.

11. As the matter was urgent, the Office engaged technical experts to produce a draft “standard for the biometric template required by the Convention”, also known as ILO SID-0002. It used the existing ICAO standards and the draft ISO standards under development to provide the technical information required by Members seeking to create a globally interoperable SID containing a biometric fingerprint template encoded into a two-dimensional bar code. Dialogue with both the ICAO and the ISO has continued since the adoption of Convention No. 185. Meanwhile, the ICAO has finalized its next draft of Document 9303 to support the issuing of ePassports, and the ISO has published the draft biometric standards as international standards. The publication of new versions of ICAO Document 9303(Parts 1 and 3) caused significant concern as they introduced substantial new material to support ePassports. In 2009, however, the ICAO secretariat agreed to review the matter and found that the portions dealing with the physical layout of the document had not changed in any substantive way. ILO Members should therefore feel free to use Document 9303, Part 1, Volume 1 (sixth edition, 2006), instead of Document 9303, Part 1 (fifth edition, 2003). Similarly, Document 9303, Part 3, Volume 1 (third edition, 2008) can be used instead of Document 9303, Part 3 (second edition, 2002). The relevant portions of these documents are substantially equivalent to the relevant portions of the previous versions cited in Annex I to the Convention, and they have the added advantage of being freely available on the ICAO web site. The ICAO has also undertaken to assist the ILO by eliminating some of the confusion among ICAO contracting States as to whether a SID under Convention No. 185 was intended to serve as a travel document. It will do this by amending the current versions of Document 9303, Parts 1 and 3, to recognize the SID as a specific type of identity document using an “S” as the first letter in the machine-readable zone. This is significant in that it separates the SID from the primary document categories of passport (“P”), visa (“V”) and identification card (“I”), giving it a special status similar to that of the ICAO-managed aircrew card (“A”).

12. The ISO’s involvement was initially confined to recommending suitable international standards to be used for the biometric template and the bar code. Given the rudimentary state of international biometric standards and the negative experience arising from the lack of interoperability in other programmes, it also recommended that the ILO pay heed to the need to ensure that all of the biometric systems procured by Members for the enrolment and verification of seafarers were interoperable with each other. The Office subsequently commissioned tests of biometric products in 2004, 2005, 2006 and 2008. Twelve biometric products from 11 different sources, each consisting of a fingerprint sensor combined with an enrolment and matching algorithm, have been found to meet the requirements of

Convention No. 185. It has been demonstrated, for example, that each of those products can be used to verify a seafarer's fingerprints enrolled by any of the others – and to enrol the prints in such a way that they can be verified by each of the other products – with an average equal error rate across all product combinations of under 1 per cent. This means that a person using another seafarer's SID would have only a 1 in 100 chance of having their fingerprints verified, while the legitimate holder of the SID would have a 99 in 100 chance of having their fingerprints verified. Achieving such interoperability across a diverse group of products from around the world represents a significant milestone in biometric interoperability, and each of the tests has been presented to and reviewed by the ISO–IEC JTC 1 subcommittee on biometrics (SC 37). The results of these ILO tests were taken into account by the SC 37 subcommittee to make modifications to the fingerprint template standard being developed by the ISO and to help develop a standard on biometric interoperability testing.

Potential improvements

13. Following the successful cooperation on biometric interoperability, the SC 37 subcommittee also agreed to support Convention No. 185, by developing a new standard known as a biometric profile. The purpose of a biometric profile is to combine a group of related biometric standards, together with information about how to use them in a specific application. Since the SID conforming to Convention No. 185 is a globally interoperable biometric identity document, it was a good candidate for such a standard. After almost five years of development the standard *ISO–IEC 24713-3 Biometric profiles for interoperability and data interchange – Part 3: Biometrics-based verification and identification of seafarers* was published in August 2009. Many important issues, both technical and practical, were considered in the formal ISO process of developing this standard; in regard to all aspects, the standard states that *“This standard is not intended in any way to conflict with the existing international Convention No. 185 established by the International Labour Organization and ratified by various member States of the ILO. Instead, the approaches profiled in this standard can be used to satisfy the requirements of the current version of Convention No. 185, while also allowing alternative approaches outlined in this standard to be used in the future by the ILO if the technical documents associated with or annexes of Convention No. 185 are modified”*. The final ballot on this document becoming an international standard was supported unanimously by the 22 countries which voted, representing a high degree of international support for the technical solutions described in the standard.
14. In 2009, the ISO sent a copy of the biometric profile standard to the International Labour Office, together with a note which emphasized the key points of the standard and made some recommendations to the ILO. One aspect of the present consultations is therefore to review the merits of this ISO standard and discuss whether the ILO should bring it within the framework of Convention No. 185. Possible responses to the recommendations from the ISO will also need to be discussed. There are four significant issues that need to be considered prior to deciding on the response to the ISO recommendations.
15. Firstly, the ISO–IEC biometric profile standard defines the specific relevant sections and the values of optional parameters for proper capture and storage of fingerprint images as part of seafarer enrolment,⁴ for proper capture and storage of facial images to be used in the photograph on the SID and in the national electronic database,⁵ to define the

⁴ Using the standards in ISO–IEC 19794-4.

⁵ Using the standards in ISO–IEC 19794-5.

fingerprint minutiae template stored in the SID bar code and the national electronic database⁶ and to encapsulate and digitally sign the data stored in the two-dimensional bar code.⁷ It also provides some details on the use of the SID, including pointing out some of the complexities around the national focal points and the difficulty of providing secure and private verification of SIDs through data stored in the national electronic database maintained by each national focal point. The ISO standard proposes a scheme involving a single focal point coordination centre which could be used to coordinate secure communications between border or port authorities wishing to verify SIDs and all of the national electronic databases maintained by their respective national focal points.

16. The entire text of this standard appears to be in harmony with the existing practice implementing Convention No. 185 and with ILO SID-0002 (see paragraph 11 above), but since the ISO standards that were in draft form when ILO SID-0002 was drafted have now been completed, there are several minor technical changes in the formatting of data in the bar code which are recommended in the ISO–IEC biometric profile standard. These can all be addressed simply by changing ILO SID-0002, without amending Convention No. 185 itself or its annexes. The details of which bits and bytes would change are not described here, but should easily be understood by any manufacturer familiar with the ISO standards and the existing requirements of ILO SID-0002.⁸
17. The most important aspect of this change to the bar code format concerns the placement of the seafarer’s name, date of birth and other demographic information. Under ILO SID-0002 this information is to be encoded at the end of the fingerprint data (which duplicates information stored in the machine-readable zone and printed on the visible zone). This coding would be dispensed with in the ISO standard. Instead, the fingerprint data would be followed by a digital signature block using an ISO–IEC Common Biometric Exchange Formats Framework (CBEFF) standard.⁹ There would be important advantages in having a digital signature in the bar code, as it would allow the SID to be authenticated without an online query to the issuing Member’s focal point. The addition of a digital signature, if properly implemented, would also provide greater assurance that the SID is genuine than any of the other security features specified in Convention No. 185 and, since the object which has been digitally signed is the fingerprint record, combining the digital signature with biometric verification of the seafarer provides assurance that the seafarer is the genuine holder of a genuine SID. In the past, it was considered too difficult to add a digital signature within the limited space available on a two-dimensional bar code, but the ISO experts developed a special CBEFF patron format,¹⁰ the most compact such patron format ever created. They also developed a unique and innovative CBEFF security block format.¹¹ The net result would be the reduction of the size of the SID’s bar code under

⁶ Using the standards in ISO–IEC 19794-2.

⁷ Using the standards in ISO–IEC 19785.

⁸ In fact, since the first byte of the bar code data specified in SID-0002 is always different from the first byte specified in the ISO biometric profile, it would be relatively simple for manufacturers to support both formatting options for a transitional period if the updated formats specified in the ISO–IEC biometric profile are endorsed by the ILO.

⁹ The ISO–IEC 19785 Common Biometric Exchange Formats Framework (CBEFF) standard.

¹⁰ ISO–IEC JTC 1/SC 37, Patron format for seafarers’ identity document.

¹¹ ISO–IEC JTC 1/SC 37, Security block format for seafarers’ identity document. This security block format is innovative because it uses the Secure Hash Standard (Secure Hash Algorithm –

ILO SID-0002.¹² This would not only add security but would make the printing and reading of the bar code somewhat easier, as bar codes with fewer bytes allow the individual printed symbols to be larger.¹³ The inclusion of digital signatures would require some extra effort on the part of those implementing SID issuance systems. However, this is a relatively minor exercise for those companies with expertise in document issuance, as many other documents, such as ePassports, also feature digital signatures.

18. The second issue raised by the ISO standard is that of the focal point coordination centre. One technical aspect of Convention No. 185 that was not fully covered either in the Convention or in ILO SID-0002 was how to ensure that national focal points can provide the information from the national electronic database referred to in Article 4 of the Convention to immigration and other competent authorities while ensuring that all applicable data protection and privacy standards are adhered to. The immediate availability of a subset of information contained in the national electronic database is mandated by Article 4 of the Convention, but exchanging such information in a manner which respects all the applicable privacy and data protection standards may be difficult, as that typically requires a secure exchange which identifies both the requester of the information (the border or other competent authority) and the supplier of the information (the national focal point of the SID issuing country). The ISO–IEC biometric profile standard recommends the creation of a global focal point coordination centre which would securely exchange keys with each ILO Member’s SID issuance authority and each ILO Member’s border or immigration authorities.
19. The focal point coordination centre would offer a constantly available web service through which any port or border point given access through the relevant authority in that country could query the validity of a given SID. The server at the focal point coordination centre would then establish a secure link with the national electronic database of that country and verify that SID, allowing it to respond to the querying entity at the port or border point. The specific mechanisms for the operation of the focal point coordination centre are only generally described in the ISO–IEC biometric profile, as they would ultimately be selected by the entity which operates the focal point coordination centre, but a number of scenarios of queries and responses are described. This concept would appear to be very useful, since a comparable system of secure communications worldwide between immigration authorities, border authorities and SID issuance authorities could not be achieved under bilateral arrangements without significant complexity and cost. At the same time, the development and operating costs of such a centre would be substantial, and a single trusted entity would need to be selected to manage it. Whether the trusted entity should be an intergovernmental agency (such as Frontex)¹⁴ or a private company (which is the method followed by the ICAO for its Public Key Directory (PKD) – see below) is also a matter that would need to be considered.
20. There would be a further important advantage of a focal point coordination centre, for border control authorities wishing to make use of the added security inherent in the digital

256 bits (SHA-256)) and the Elliptic Curve Digital Signature Algorithm (ECDSA) to create a compact but cryptographically secure digital signature.

¹² With the removal of the demographic information in the two-dimensional bar code, its maximum length becomes 635 bytes instead of the maximum length of 686 bytes defined in ILO SID-0002.

¹³ The ISO–IEC biometric profile anticipates this and allows flexibility of the bar code symbol size (as opposed to the fixed symbol size specified in ILO SID-0002), as long as the bar code is compatible with ISO–IEC 15438, which defined the PDF 417 symbology used in the SID.

¹⁴ The agency of the European Union created as a specialized and independent body to coordinate operational cooperation between Member States in the field of border security.

signature block recommended for inclusion in the SID bar code. As noted above, there would be no significant problems for the authorities issuing SIDs to include in the bar code the data corresponding to a digital signature. However, the use of the digital signature in a SID to verify its authenticity requires that the entity doing the verification has access to the public key associated with the private key used to sign the SID when it was issued. This requires an exchange of certificates containing such keys between all authorities issuing SIDs and all authorities wishing to verify SIDs across the globe. The method used to facilitate this exchange is called a Public Key Infrastructure (PKI) and it requires a considerable amount of effort to create and maintain. The ICAO uses a simplified PKI, the ICAO PKD, to exchange certificates for use with ePassports, and this could be modified to also support the PKI for SIDs. One option might be for the Office to inquire with the ICAO secretariat to determine whether this is possible and what the costs would be to each ILO member State that wishes to participate. As the ICAO PKD requires annual payments from the ePassport issuing authorities that use it, it is highly likely that similar payments would be required from authorities wishing to participate in such a scheme with respect to the SID. On the other hand, if a focal point coordination centre of the kind described above were agreed upon, it would require some type of PKD to support the encrypted communications needed for online verification of SIDs; there would thus be no substantial extra cost above that which would be required for the establishment of such a coordination centre.

21. Thirdly, the ISO–IEC biometric profile contains recommendations concerning the data to be provided for each record in the national electronic databases, as set out in Annex II to Convention No. 185. The recommendations are as follows:
- (a) The “*date of expiry or withdrawal or suspension of the identity document*” would have a second field associated with it which would specify whether the date mentioned is associated with the expiry, withdrawal or suspension of the document. This would appear to be compatible with the requirement relating to point 4 of Annex II.
 - (b) The “*biometric template appearing on the identity document*”, mentioned in point 5 of Annex II, would not be mandatory if its inclusion in the database were prohibited under the law of the issuing Member. During the development of the ISO–IEC biometric profile, at least one country indicated that centralized databases of biometric data of its own citizens were unconstitutional and thus they could not support the standard unless this proviso was introduced. It should be pointed out, however, that, in accordance with Article 3, paragraph 7, of the Convention, the biometric template has to be included in the SID itself and that the reference to it in Annex II provides the border authorities of other countries with a rapid means of enabling admission of the seafarers where doubts have arisen about the SIDs produced by them. It is therefore primarily in the interest of those seafarers that the information in the national databases should be maintained and that the border authorities should have access to it (directly or indirectly). In view of the importance attached to the biometric template at the time of adoption of the Convention, countries with constitutional difficulties of this kind might consider whether the problem could be resolved by a requirement that the seafarer’s informed consent be obtained for the maintenance of the template.
 - (c) There is one additional item which is not currently in Annex II. It is marked as optional, so that existing national electronic databases already implemented by ILO Members would still be in compliance with this part of the ISO–IEC biometric profile if the recommendation were to be followed by the ILO. Specifically, the recommendation is the addition of fingerprint images corresponding to the two-finger minutiae templates already stored in the database. This has been added because the ISO considers it good practice in biometrics to retain the images as well as the

templates so that if a technology vendor goes bankrupt or there is a significant change in technology, then the fingerprints can be automatically re-enrolled using a new technology and the SIDs reissued without requiring all the seafarers to physically visit an enrolment centre once again. The ISO–IEC recommendation clearly corresponds to good practice, but it would not seem appropriate to add a reference to the fingerprint images in Annex II, since that annex relates to the elements to which other competent authorities may be given access. Instead, it would appear preferable (and not contrary to the Convention) for these images to be maintained by the issuing authority, separately from the record concerned, for the sole purpose of reissuing a SID and only if such safekeeping is requested in writing by the seafarer.

- 22.** The fourth issue to be considered is more significant. All of the other issues require changes to ILO SID-0002 (or possibly its replacement by the ISO–IEC biometric profile, since it takes account of the content of ILO SID-0002) or minor changes to Annex II of Convention No. 185. The fourth issue might raise questions of compatibility with the Convention, but it would make an important difference for the use of SIDs issued under it. The ISO–IEC biometric profile would still require the PDF 417 bar code as provided in Annex I to the Convention, but it would also allow for an optional chip. Having regard to the provisions of the Convention, Article 3, paragraph 9, it would be specified that the chip must contain no information that was not already stored elsewhere on the document. In this way, all the information on the chip would be visible in some other form (either printed directly on the SID or in the bar code). The advantage of the optional chip is that it would allow interoperability with the equipment used at borders to read ePassports. In that case, a SID could be read by a standard ePassport reader and no extra infrastructure would be required at the border, except for a fingerprint scanner in those countries which wished to verify the fingerprints of every seafarer passing through the border. Since some countries are moving to have fingerprints on their ePassports, even this would not necessarily require any extra infrastructure. The ISO recognized that this option would greatly enhance the acceptability of the SID at borders, but might not be acceptable to the ILO, which is why they made it an option. They also did not specify the exact content of the Logical Data Structure (LDS) which would be implemented on the chip to contain the data it stores. This is because the maximum interoperability with equipment designed for ePassports will require an LDS on the SID which is functionally identical to the ICAO ePassport LDS, but which is different in the specific data it contains because of the limited data elements permitted on a SID under Convention No. 185.
- 23.** The ISO has unofficially inquired whether the Office would be interested in the ISO developing an amendment to the biometric profile standard to specify the LDS of a chip-enabled SID. The JTC 1/SC 37 subcommittee would cooperate on this amendment with JTC 1/SC 17, the subcommittee on cards and personal identity. It is this group which worked with the ICAO to create the existing ePassport standard and therefore input from its experts will be essential to any LDS for the SID.
- 24.** Lastly, the ISO recommended that the periodic external evaluations of SID systems should pay particular attention to the importance of obtaining good-quality fingerprint enrolments in order to ensure the success of the SID as a biometric identity document. Fingerprint enrolment processes are not explicitly discussed in Annex III to Convention No. 185, but it would certainly be useful for the ILO to draw this to the attention of governments, as poor-quality fingerprint enrolments will make it impossible to verify a seafarer and will cause problems for seafarers when they attempt to use their SIDs.

Possible problems or challenges in implementation

25. Although the system established by Convention No. 185, and subsequently developed, is not yet in widespread use, the preceding paragraphs of this background paper indicate that the international community now has a very good product for reliable identification of genuine seafarers. The security features of the Convention were devised with the best advice from Government experts, while at the same time taking account of the concerns of both Seafarers and Shipowners. The technical features now have the benefit of continuing advice from the ISO, as well as the cooperation of the ICAO with respect to aspects of the identity document that are based on ICAO standards, and support from the IMO. There are also indications of a certain international recognition, outside the ILO, that Convention No. 185 is a suitable replacement for the outdated Convention No. 108.¹⁵
26. At the same time, because of the novelty of Convention No. 185 for the ILO, as far as the security features of the Convention are concerned, and because the Convention is unique as a binding instrument under international law, it is realistic to assume that some Members have encountered certain problems or challenges in implementing the Convention, and that others have perhaps found satisfactory solutions to those same problems. In addition, consideration must be given to the problem at the international level caused by the present low level of ratification of the Convention.

Possible problems at the national level

27. An exchange of views on problems or challenges that have arisen at the national level will therefore be an important element of the present consultations. This exchange might also lead to cooperation between ratifying Members as recommended in the resolution of the International Labour Conference referred to in paragraph 5 above.
28. One potentially serious problem in that regard relates to the cost of establishing a reliable national system for the issuance of SIDs, including the cost of producing the SIDs, which could be high for each individual SID for countries with relatively few seafarers. Similarly, the requirement to arrange an independent evaluation of the SID system every five years may place a significant burden on countries with few seafarers, as the requirement is not affected by the number of SIDs being issued.
29. One possible solution to the problem of cost is to take advantage of the collective purchasing power of all Members ratifying Convention No. 185. Since Convention No. 185 lays down so many detailed requirements for the issuance of the SID, all systems which are deployed to issue SIDs that are fully compliant with the Convention will necessarily share many similar functions and be similar in design. The nature of a SID system is also quite modular, with functional modules consisting of hardware and software that will provide the functions associated with data capture, biometric enrolment, issuance approval, stock control, SID personalization, printing of SIDs, etc. Some of these functions may be shared on the same physical computer or they may be separate and even located in different parts of the country. Some of them may be singular, while others may be

¹⁵ Council Decision of 14 April 2005, authorizing Member States to ratify, in the interests of the European Community, the Seafarers' Identity Documents Convention (Revised), 2003 (No. 185), of the International Labour Organization (2005/367/EC), OJ L 136, 30 May 2005; Commission of the European Communities: Green Paper: Towards a future maritime policy for the Union: A European vision for the oceans and seas, Brussels, 7 June 2006, COM(2006) 275 final, Vol. II – annex.

duplicated in multiple locations. It is therefore possible to conceive of a single global procurement to find vendors able to provide these functional components at a reasonable price.

- 30.** Combining all functions into a single computer in a single location could satisfy the requirements of a Member with very few seafarers, but the same components could be used to build an enterprise system for the largest countries by providing multiple networked copies of different components. There could perhaps be a single global procurement, conducted by or with the assistance of the International Labour Office on the following lines: each qualifying company could be invited to bring a sample system containing all the components identified in the procurement to Geneva, where it would be tested to ensure its compliance with the requirements of the Convention associated with the issuance system. All those companies whose systems passed this threshold would then be invited to offer the various components of their systems for sale to all ILO Members for the fixed price per component offered by the lowest priced vendor. Those companies who so wished would then be placed on a list which would be made available to ILO Members upon request. The list would include the names of the companies, the various different functional components including hardware and software which could be provided, examples of how to combine these components to create systems of various sizes and a fixed price per component. Governments seeking to deploy a SID system could then contact any of the listed companies and specify their system in terms of the number of each component (such as enrolment stations, print stations, number of SIDs to be issued, etc.). The company would then undertake to provide that system for the price indicated in the list previously agreed with the ILO and the governments would pay exactly that price. The key feature of such a list – and essential to obtaining the most favourable prices in a global procurement – would be the fact that once the prices were established there could be no negotiation. Training, language localization and local support options might be included in the list or left to separate negotiations between the government and the supplying country. In that case, the cost to the vendors of developing SID systems would be shared among all the potential buyers of such systems and the same basic system components could be deployed for large or small SID issuance systems. The resulting cost savings should be substantial, especially for countries with very few seafarers.
- 31.** A second potential advantage would be that if the global procurement were to include a mandatory component to support an online query system for the national electronic database and another mandatory module for a cryptographic system to perform digital signatures, then it would greatly simplify the exchange of keys for digital signatures on the bar code and the creation of a global focal point coordination centre, both of which were recommended in the ISO–IEC biometric profile standard discussed above.
- 32.** A third potential advantage of such a global system procurement is that it could reduce the time and cost of conducting independent evaluations. Certain aspects of the evaluations are dependent on the configuration of the hardware and software used to issue SIDs, and therefore an entity conducting independent evaluations could complete these evaluations much more efficiently if they were carried out using a system configuration with which it was already familiar. An ideal solution would be to conduct a single global procurement for entities qualified to conduct independent evaluations, resulting in a similar list of fixed prices for evaluations of systems based on the components included in the global SID issuance system procurement. As these components would all be very similar, this should reduce the cost of the evaluation, and a global procurement for independent evaluation services would further reduce the cost by encouraging competition among agencies qualified to conduct such evaluations. Of course, it would be essential for any entities seeking to bid on evaluation services to be completely separate from those bidding to provide SID issuance systems. It would also be important for any entities selected for inclusion in a list of independent evaluators to be fully qualified to conduct such evaluations. Given the proposed establishment of the Review Group and the Special

Review Board at the upcoming November 2010 meeting of the Governing Body, it would be useful to conduct a procurement for entities capable of carrying out independent evaluations in an expedited fashion. The qualified entities could then be used to conduct the review of the proposed SID issuance systems in Geneva, as contemplated in the discussion of the global procurement for SID issuance systems above.

Possible problems at the international level

33. There are also problems caused by the present relatively low number of ratifications of Convention No. 185 (which led to the temporary postponement by the Governing Body, in November 2007, of the submission of reports on the application of that Convention under article 22 of the ILO Constitution).¹⁶ One problem is that there have not yet been a sufficient number of countries requesting to be added to the list of Members which fully meet the minimum requirements concerning processes and procedures for the issuance of SIDs. This means that there are not yet any precedents on how the submissions to the Review Group and the Special Review Board will be considered and presents an extra risk to the early ratifying countries in terms of how strict their policies and procedures must be and how thorough their independent evaluations must be in order to obtain a recommendation to be added to the list.
34. Another problem is that it is difficult to make sure that the legitimate expectations of the ratifying countries which have gone to the significant expense of deploying SID issuance systems compliant with Convention No. 185 are met by the other countries which in 2003 voted in favour of the Convention without any votes against. These ratifying countries have offered their seafarers a much more secure form of identification than was provided under Convention No. 108 and have a reasonable expectation of their seafarers receiving favourable treatment in terms of shore leave, transit, transfer and repatriation, but as long as Convention No. 108 SIDs continue to be the dominant form of identity document for seafarers, it is not practical for many nations to install the infrastructure required to properly utilize the extra security provided by Convention No. 185, such as biometric verification of seafarers and the ability to query national focal points to verify the authenticity of SIDs. This is especially frustrating to those early ratifiers, as all ILO Members are to be given access to much of the information provided under the Convention through the national focal point; there should be some significant benefit for the ratifying Members, and especially their seafarers, in exchange for making this information available.

Matters for possible discussion

35. The preceding sections of this paper have been intended to provide a background for the discussions in the consultations. Although they cover many different subjects, some of the matters that might be discussed, which are to a certain extent interlinked, are summarized below:

(a) Developments so far

Participants may wish to comment on the developments outlined in paragraphs 3–12 above, indicating their experience and views with respect to international cooperation in the implementation of Convention No. 185; progress in obtaining an independent

¹⁶ See document GB.300/LILS/8.

evaluation of their issuance processes and procedures in accordance with paragraph 4 of Article 5 of the Convention; and other relevant matters.

(b) Potential improvements

This part of the discussions would cover the ISO–IEC biometric profile and the related recommendations (or proposed improvements as compared with the present practice).

(i) Adjustments to Standard ILO SID-0002

The proposed improvements referred to in paragraph 16 above appear to be technically desirable and are minor. The addition of a digital signature, referred to in paragraph 17, would not be difficult to achieve, would have advantages for the readability of the bar code on the SID and would enable an important enhancement of security should ILO Members decide to participate in a public key scheme. For these reasons, the Office intends to present to the ILO Governing Body at its November 2010 session a revised version of the ILO SID-0002 standard, so as to take account of the ISO–IEC recommendations concerned, subject, however, to consideration of any views received in the consultations. As in the case of the last revision of the Standard, the amendments would be submitted “on the understanding that biometric products conforming to the Standard as now worded will be considered as compliant with the Standard for a period of two years from the date of approval of the present changes”.¹⁷

(ii) Focal point coordination centre and digital signature

The recommendations concerning the focal point coordination centre and the digital signature in so far as it would involve the establishment of public key arrangements, referred to in paragraphs 18 and 20 above, must undoubtedly be given the fullest possible consideration. At the same time, account must be taken of the potential cost and of the effect of significant changes on countries that are close to ratification of the Convention. Expert advice on these aspects is greatly needed and, it is hoped, will be provided during the consultations.

(iii) Possible amendments to Annex II to Convention No. 185

In paragraph 21 above, the Office has set out preliminary considerations concerning three recommendations relevant to Annex II to Convention No. 185, and has indicated its opinion that there is no need to amend that annex. The views of participants in the consultations would be welcome.

(iv) Reply to the ISO concerning the optional chip

The Office would be grateful for advice from the consultations as to the reply that should be given to the ISO on the questions raised in paragraphs 22–23 above.

(c) Possible problems at the national level

The discussions envisaged would relate to problems and challenges at the national level (referred to in paragraph 27 above) and the way in which they might be handled,

¹⁷ See document GB.294/16/3.

possibly by reference to experience from other countries or through bilateral, (sub)regional or international cooperation. With respect to the reduction of costs, participants may also have comments or ideas based on the suggestions made in paragraphs 28–32 above.

(d) Possible problems at the international level

Paragraphs 33 and 34 provide a background for an exchange of ideas on ways of enhancing recognition of the SIDs issued under Convention No. 185, as well as on any other problems that constituents have encountered at the international level.

Report on the present consultations

- 36.** Lastly, the Office would inform the Governing Body of the advice received from participants in the consultations and on any conclusions reached.