



## 简化手续专家组（FALP）

### 第十四次会议

2026年4月20日至24日，蒙特利尔

议程项目 3：关于附件 9 —《简化手续》的修订

#### 关于国际民航组织数字旅行证书经修订的定义及拟议的标准和建议措施

（由新西兰作为国际民航组织实施与能力建设工作组（ICBWG）主席提交）

#### 摘要

本工作文件提出与 Doc 9303 号文件《机读旅行证件》相关的新的和经修订的定义，并创建两项标准和一项建议措施，以纳入附件 9 —《简化手续》。这两项标准与建议措施（SARPs）旨在以类似于机读旅行证件（MRTDs）和电子机读旅行证件（eMRTDs）的方式，将数字旅行证书（DTCs）纳入国际民航组织监管框架。该提案将确保机读旅行证件的可互操作性和标准化，其完整性和安全水平达到适合边境和移民通关之目的。本工作文件还将力求在附录中定义数字旅行证书，使其区别于目前正在开发或在旅行过程中使用的其他可核验的证书。

简化手续（FAL）专家组要求实施与能力建设工作组（ICBWG）审查简化手续专家组第十三次会议（FALP/13）提出的关于旅行证件经修订的定义。实施与能力建设工作组和旅客身份识别方案技术咨询组（TAG/TRIP）认为应保留该定义的意图，尽管重新提交了一些修改供审议。

关于附件 9 标准与建议措施的提案已由旅客身份识别方案技术咨询组（TAG/TRIP）的专家进行了讨论。

#### 简化手续专家组的行动：

请简化手续专家组（FALP）同意本工作文件附录 A 中拟议新增的附件 9 标准和建议措施。

### 1. 数字旅行证书简介

1.1 大多数成员国现已颁发电子机读旅行证件（eMRTDs），许多国家正在利用电子机读旅行证件带来的旅客便利性和边境管理安全性提升的优势。将旅客的个人和生物识别数据以数字化方式存储在电子护照的集成电路（IC 或芯片）中带来了显著的好处，包括通过面部识别更无缝地核验护照持有人的身份，并为相关当局提供验证旅行证件及其数据的手段。

1.2 电子机读旅行证件及其数字生物识别为创建可核验的数字证书提供了进一步机会。大约十年前，业界和成员国开始探索可核验的数字证书。然而，这些数字证书缺少标准化的做法，危及旅客身份识别生态系统的全球可互操作性和安全性。

1.3 可核验数字证书的快速发展促使新技术工作组（NTWG）寻求以数字格式颁发旅行证书的标准化做法，以确保维持全球可互操作性和安全性 — 尤其是在数字证书旨在用于边境管制和移民通关的情况下。

1.4 2020 年，首套数字旅行证书（DTC）技术规范得到旅客身份识别方案技术咨询组（TAG/TRIP）正式批准，纳入 Doc 9303 号文件《机读旅行证件》。全球可互操作的数字旅行证书旨在用旅行者身份的数字代表形式临时或永久地取代传统护照，它可通过旅行证件签发机关的公钥基础设施进行验证。分阶段扩展这些规范以涵盖更多实体设备的工作正在进行中，信息传输安全（数字旅行证书传输协议）的工作也在进行中。

1.5 数字旅行证书指导原则和技术规范可在国际民航组织旅客身份识别方案（TRIP）出版物网站上查阅。<sup>1</sup>

1.6 目前，全球各地使用多种类型的可核验数字证书，包括移动驾照和可核验的数字条码，如国际民航组织可见数字印章等。毫无疑问，数字证书正在多个行业中转变信息使用和核验的方式，航空业也不例外。

1.7 业界和成员国目前正积极试点用于旅行过程中不同目的的各不同类型的可核验数字证书。虽然航空生态系统中某些使用案例可能需要不同级别的身份保障，但边境清关和移民仍要求身份证书代表最高级别的数字安全和完整性 — 这正是国际民航组织数字旅行证书期望实现的目标。因此，数字旅行证书与其他类型的可核验证书不同，正如电子护照与可能在旅行过程中出示的其他文件不同一样。

1.8 然而，与电子机读旅行证件不同，附件 9 并未具体提及数字旅行证书或要求这些证书符合 Doc 9303 号文件的规定。为确保全球可互操作性和安全性，国际民航组织监管框架必须包含用于规范数字旅行证书的创建和使用的标准和建议措施（SARP）。实施与能力建设工作组（ICBWG）在 TAG/TRIP 的认可和新技术工作组的密切支持下，负责起草关于数字旅行证书的附件 9 标准和建议措施（SARP）的初步建议。

## 2. 关于数字旅行证书的讨论

2.1 为了维护完整性、安全性和可互操作性，数字旅行证书（例如旨在取代护照进行部分或全部边境通关的那些数字旅行证书）必须符合 Doc 9303 号文件的规定。多年前 MRTD 和 eMRTD 就已树立了这一先例。然而，数字证书及其发展对于旅行证件签发机关和边境机关代表了一个根本性的转变。需要考虑到现有的流程、系统、基础设施和投资。尽管希望加快步伐，但数字旅行证书的实施也不能以牺牲航空安保或全球可互操作性作为代价。技术和政策问题依然存在，目前正与数字证书和数字旅行证书开发同步得到处理。

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<sup>1</sup> <https://www.icao.int/icao-trip/publications><https://www.icao.int/icao-trip/pulications>

2.2 数字旅行证书的使用虽然是新兴的，但通过各试点项目正在快速推进。因此，Doc 9303 号文件关于数字旅行证书的规范制定正在分阶段进行，技术专家们正在解决与不同使用案例相关的互操作性和安保问题——尤其是涉及附加设备（如手机）以及可核验身份信息安全传输的相关问题。

2.3 2020年数字旅行证书开发的第一阶段规定了一个通用的“虚拟组件”，它精确复制了eMRTD芯片所含信息（包括生物数据、面部生物识别特征和数字签名，用于核验信息的真实性）。这有时被称为“类型一”数字旅行证书，例如，可由旅行过程中的实体（如航空公司、机场和成员国）提供内容放入钱包中，预先发送到接触点，以便利旅行。

2.4 大多数现有试点使用“类型一”数字旅行证书虚拟组件。根据 Doc 9303 号文件，只要芯片中的数字信息保持不变，并保留护照签发机关（例如国家公钥基础设施）的签名，那么无论虚拟组件由哪个实体创建或生成，该证书都将被视为由旅行证件签发机关“签发”的证书。需要注意的是，对于“类型一”数字旅行证书的实施，对数字旅行证书“虚拟组件”的核对仍旨在以对该旅行证件签发机关已签发的源 eMRTD 的核对为依据。

2.5 引入要求数字旅行证书必须“根据 Doc 9303 号文件签发”这一标准，将确保无论是哪一个实体提供内容或创建数字旅行证书，该数字旅行证书都具有可互操作性和安全性。随着数字旅行证书后续阶段得到规范，这种做法也将为数字旅行证书开发提供未来保障，并解决可互操作性和安全性问题。

2.6 与之前的电子机读旅行证件一样，国际民航组织成员国必须采取措施确保数字旅行证书以一致的方式创建和使用，以便我们的发证机关和边境管理机关能够做最具成本效益的投资，同时符合全球标准和整套规范，同时为人们提供无缝且安全的便利。

### 3. 关于旅行证件定义的简介

3.1 实施与能力建设工作组在 FALP/13 会议上提交了 WP/28 号工作文件，概述了附件 9 第 3 章的拟议修改，涵盖了对三项定义和 14 项标准与建议措施（SARP）的修订，以及一项拟议的新建议措施。

3.2 在三项定义修订中，实施与能力建设工作组提出了下列旅行证件的定义，删除了“官方（证件）”，新增了“可被接受代替护照的（证件）”：

**旅行证件** 由一国或一个组织颁发的可由有合法权利的持有人用于国际旅行的护照或可被接受代替护照的其他官方身份证件。

3.3 意图是为旅行证件定义中提及官方身份证件进行澄清，指出通常仅在没有护照可用时方出现其他可接受用于国际旅行的证件。其意图还在于，随着时间推移，该定义将逐渐转变以反映这样一个事实：并非所有被接受用于旅行的证件都须被称为旅行证件（例如，在某些情况下可以使用驾驶执照，但它缺乏实施与能力建设工作组认为特定旅行证件所代表的安全性和全球可互操作性）。

3.4 专家组同意关于附件 9 的修订提案，但“旅行证件”的定义除外。专家组要求实施与能力建设工作组审查该定义，特别是“代替”一词的使用，并在下次简化手续专家组会议上向专家组报告。

#### 4. 关于旅行证件定义的讨论

4.1 实施与能力建设工作组和 TAG/TRIP 审查了措辞，同意该定义的意图仍表示旅行证件应是安全且可互操作（例如护照）的理想方向，并区别于在某些情况下可出示用于旅行的其他证件。

4.2 若因其由国家或组织正式签发就继续将其他证件（如驾照、出生证）描述为与护照同等级别存在的旅行证件，其代价将是牺牲最低安全性和全球可互操作性的标准。

4.3 “in lieu（代替）”一词可用“in place of”或“instead of”替换，但仍保持该定义的意图。

#### 5. 建议

5.1 请简化手续专家组：

- a) 同意本工作文件附录 A 中提出的对附件 9 标准和建议措施的拟议修订。
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## 附录 A

### 对附件 9 — 《简化手续》的修订提案

#### 第 1 章 定义和一般原则

##### 拟议的新定义

数字旅行证书（DTC）符合 Doc 9303 号文件所载规格的数字格式的旅行证书，旨在以旅客身份的数字形式暂时或永久地取代传统护照。

##### 经修订的旅行证件的定义

旅行证件 由一国或一个组织颁发的可由有合法权利的持有人用于国际旅行的护照或可被接受代替护照的其他官方身份证件。

#### 第 3 章：人员及其行李的入境和离境

##### 拟议的新标准 — 旅行证件

3.xx 缔约国签发数字旅行证书（DTC）时，必须按照 Doc 9303 号文件的规范进行。

注 — 当一个实体根据 Doc 9303 号文件创建数字旅行证书虚拟组件时，则被视为由签发机关所“签发”。

##### 拟议的新标准 — 旅行证件的查验

3.xx 为移民管制或边境通关目的核验数字旅行证书的缔约国，必须根据 Doc 9303 号文件进行被动验证，以确定数字旅行证书是否由签发机关签发并确认数据完整性。

注 — 进行被动验证（即查验 eMRTDs 的基准安全方法）证明数字旅行证书虚拟组件的内容是真实且未被更改的。

##### 拟议的新建议措施 — 旅行证件的查验

3.xx 缔约国应仅接受根据 Doc 9303 号文件规范签发的数字旅行证书用于移民管制或边境通关之目的。

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## APPENDIX B

NEW or REVISED SARP PROPOSAL: AMENDMENT, ANNEX 9, CHAPTER 1, 3  
[STANDARD/RECOMMENDED PRACTICE]

## IMPACT ASSESSMENT

## 1. What is the problem that this proposal is designed to address?

*Please include specific details*

Industry and Member States are now actively piloting verifiable digital credentials for different purposes within the travel continuum, including Digital Travel Credentials intended to facilitate passengers through immigration and border control.

Although DTC specifications have been developed by TAG/TRIP in Doc 9303 – *Machine-Readable Travel Documents*, Annex 9 does not contain the necessary DTC-related Standards and Recommended Practices required to ensure security and interoperability.

Without the requirement to follow a harmonised and consistent approach to DTC creation and use, there is a risk that significant cost, complexity and confusion will be introduced into the aviation ecosystem – particularly for border clearances processes. For integrity and security, the identity of the traveller and their identity data must be able to be authenticated in a consistent and harmonised way.

Like MRTDs and eMRTDs, DTCs need to comply with agreed ICAO SARPs – hence new SARPs are required in Annex 9.

## 2. What alternatives to SARPs were considered to solve the problem?

None	Circular	Manual	Policy	<i>Other (please explain)</i>
X				

## 3a. What is the impact of this proposal on a State?

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Implementing this proposal will enhance civil aviation safety		X			
<i>Rationale:</i> Like MRTDs and eMRTDs, a standardised approach to traveller identification is required to ensure States do not have to make multiple or duplicate investments to process travellers using different types of travel credentials. If DTCs are created in the same way, consistently across the aviation ecosystem, investment is focussed and the treatment of risk can be more targeted to ensure the correct passengers are flying, and traveller identification is performed with integrity.					
Implementing this proposal will increase air navigation capacity and improve efficiency			X		
<i>Rationale:</i> N/A					
Implementing this proposal will enhance global civil aviation security and facilitation (taking	X				

into account impact on human rights, health and privacy, if any)					
<p><i>Rationale:</i> As stated before, as with MRTDs and eMRTDs, a standardised approach to traveller identification is required to ensure States do not have to make multiple or duplicate investments to process travellers using different types of travel credentials. If DTCs are created in the same way, consistently across the aviation ecosystem, investment is focussed and the treatment of risk can be more targeted to ensure the correct passengers are flying, and traveller identification is performed with integrity.</p> <p>A compliant Doc 9303 DTC will be more secure because the credential will be created consistently, with security and global interoperability as a requirement. With regard to facilitation benefits and convenience, IATA surveys indicate a desire from passengers to hold a digital credential that can be shared securely from a mobile device. For border clearance purposes, a DTC must still represent the highest degree of trust and security, while also being able to be used and validated in different parts of the world in the same way, just as interoperable travel documents are.</p>					
Implementing this proposal will foster the development of a sound and economically-viable civil aviation system	X				
<p><i>Rationale:</i> Globally interoperable DTCs contribute to more seamless passenger flows. The ability to share verifiable traveller information in advance, in order to pre-process, de-risk and facilitate flow on arrivals is the next step in leveraging the power of the eMRTD.</p> <p>DTCs have a significant contribution to make to an economically viable civil aviation system, provided they meet interoperability and security standards, which is why the Annex 9 SARPs are critical.</p>					
Implementing this proposal will minimize the adverse environmental effects of civil aviation activities			X		
<p><i>Rationale:</i> Not applicable</p>					

3b. Do the benefits of this proposal justify the cost of its implementation?

Yes	No	Not sure	Not applicable
X			

4a. What is the impact of this proposal on **Industry**?

	<i>Strongly Agree</i>	<i>Agree</i>	<i>Neutral</i>	<i>Disagree</i>	<i>Strongly Disagree</i>
Implementing this proposal will enhance civil aviation safety		X			
<p><i>Rationale:</i> The same safety rational for Member States applies to Industry.</p>					
Implementing this proposal will increase air navigation capacity and improve efficiency			X		
<p><i>Rationale:</i> Not applicable</p>					

Implementing this proposal will enhance global civil aviation security and facilitation (taking into account impact on human rights, health and privacy, if any)	X				
<i>Rationale:</i> Note that the same rationale applies – Industry need the confidence to develop products and services that integrate well with aviation and border processes, to enable the most convenient and efficient facilitation of passengers. Note also that DTCs can work within the aviation ecosystem alongside other verifiable credentials that could be generated by airlines and airports (for example, proof of age for alcohol purchase, proof of flight, lounge access). DTCs are intended for high-security and high integrity processes (e.g. border clearance).					
Implementing this proposal will foster the development of a sound and economically-viable civil aviation system	X				
<i>Rationale:</i> As described, interoperable DTCs provide facilitation benefits for the entire ecosystem.					
Implementing this proposal will minimize the adverse environmental effects of civil aviation activities			X		
<i>Rationale:</i> Not applicable					

4b. Do the benefits of this proposal justify the cost of its implementation?

Yes	No	Not sure	Not applicable
X			

5. How long would it take for States and Industry to implement this proposal?

Already implemented	0-1 years	1-2 years	2-5 years	5-10 years	More than 10 years
	X				

6. Financial implications of the proposal

<p>The cost impact on States would include:</p> <ul style="list-style-type: none"> <li>• The creation and acceptance of a DTC is not mandatory – therefore the costs associated with DTCs are optional.</li> <li>• If a State chooses to allow DTCs for the purposes of border and immigration, they will likely already be facilitating passengers using eMRTDs and so base technology and approach exists already.</li> <li>• Depending on the integration, States may need to build a technical mechanism to receive and validate digital information in advance. As this is not mandatory, and is aligned with the way common systems perform already, the expected cost is not prohibitive – but would need to be balanced against the benefits expected to be gained.</li> <li>• Aligning existing pilots with Doc 9303 specifications (if they are not already).</li> </ul>
<p>The cost impact on the industry would include:</p> <ul style="list-style-type: none"> <li>• Aligning existing border clearance pilots with Doc 9303 Specifications (if they are not already).</li> </ul>

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## IMPLEMENTATION TASK LIST AND OUTLINE OF GUIDANCE MATERIAL

### 1. IMPLEMENTATION TASK LIST

#### 1.1 Essential steps to be followed by a State in order to implement proposed amendments<sup>1</sup>

##### *Introduction of SARPs for Digital Travel Credentials*

1.1.1 For States that are developing or planning to implement DTCs, the creation and validation of DTCs must be in accordance with Doc 9303.

1.1.2 This may involve:

1.1.3 Assessment of current pilots and and/or implementations and identification of gaps between implementation and Doc 9303;

1.1.4 Alignment of proposed future DTC implementations with Doc 9303 in terms of States' creation of a DTC, or the acceptance of a DTC for border clearance and immigration purposes;

### 2. STANDARDIZATION PROCESS

2.1 Effective date: ■ [Month/Year]: to be completed by Secretariat

2.2 Applicability date: ■ [Month/Year]: to be completed by Secretariat

### 3. SUPPORTING DOCUMENTATION:

3.1 ICAO documentation:

Title	Type	Publication date
ICAO Guide for Assessing the Security of Handling and Issuance	Guidance Material	2016 and currently under review
Doc 9957, <i>The Facilitation Manual</i>	Guidance Material	
ICAO Guide for the Implementation of DTCs	Guidance Material	Under development
ICAO DTC Policy and Guiding Principles	Guidance Material	2026

3.2 External documentation:

Title	External Organization	Publication date

<sup>1</sup> Amendment of a format or clarification nature are not allowed in this Appendix.

4. **IMPLEMENTATION ASSISTANCE TASKS**

<b>Type</b>	<b>Global</b>	<b>Regional</b>
ICAO TRIP Symposia	Annual TRIP Symposium	TRIP Regional Meetings and Symposia
Working Group and Board Meetings	TAG/TRIP, ICBWG, NTWG and PKD	TAG/TRIP, ICBWG, NTWG and PKD

5. **UNIVERSAL SECURITY AUDIT PROGRAMME (USAP)  
OR UNIVERSAL SAFETY OVERSIGHT PROGRAMME  
(USOAP)compliant an**

5.1 SARPs fall under the USAP programme in terms of compliant and secure issuance of travel documents.

— 完 —