

**ICAO***International Civil Aviation Organization***The Twelfth Meeting of the Common aeRonautical Virtual Private Network Operations Group (CRV OG/12)***Denarau Island, Fiji, 23-26 January 2024*

- Agenda Item 7: CRV contract management
- Various CRV users and their joining process
 - Contract Extension/renewal

CRV CONTRACT MANAGEMENT PLANNING

(Presented by USA/FAA)

SUMMARY

This paper presents the CRV contractual life cycle and its requirements to provide a telecommunications infrastructure for current and future Air Traffic Control services in the region.

1. INTRODUCTION

1.1 CRV was implemented in 2019 after determining, in 2013, the need to replace dedicated point to point circuits supporting AFTN/AMHS and voice services.

1.2 The objective of CRV was to provide a common IP network to support the transition of X.25 and analog voice service to AMHS over IP and VoIP, respectively. The objective was also to keep the cost low, compared to dedicated circuits, by eliminating the maintenance of obsolete multiplexers and other equipment.

1.3 There are plans to support additional traffic and systems in the future, on top of the ICAO Weather Information Exchange Model (IWXXM), which has been adopted and implemented in the region. These new and emerging requirements will most likely result in existing CRV users increasing their bandwidth allocation to ensure timely information delivery as mandated by ICAO Annex X.

1.4 The CRV contract is scheduled to expire by December 2028, which includes a one year contract extension.

2. DISCUSSION

2.1 There are two options to sustain the IP network in the region:

- a) Issue a tender package for a new CRV replacement contract or
- b) Extend the current CRV contract for another five years to December 2033

2.2 Issue a tender for a new CRV contract:

2.2.1 A Request for Information (RFI) should be published in 2024 or early 2025 to allow results to be reviewed and a decision to be made to move forward.

2.2.2 CRV members will be required to provide funding to the ICAO CDI (formerly TCB), no later than 2026, to initiate a tender package and provide legal guidance for the evaluation process.

2.2.3 A tender package should be released by 2026 to allow enough time for the evaluation process, with a goal to initiate a new contract by early 2028.

2.3 Extend the current CRV contract:

2.3.1 CRV members can decide to extend the CRV contract, beyond its expiration in 2028, after reviewing the results of the RFI published in 2025.

2.3.2 CRV members will be required to negotiate pricing for the current services, and potential new services, by 2026. This will allow time to prepare a CRV contract replacement if the current CRV vendor and CRV members cannot reach an agreement for an extension.

2.4 Identify new and emerging requirements. If the new types of messages are based on XML, the CRV OG needs to identify bandwidth requirements and coordinate with new/emerging system owners to optimize bandwidth and budget accordingly.

2.4.1 The current maximum CRV user bandwidth under is 2Mbps, with many locations having 1Mbps or lower due to infrastructure limitations resulting in higher prices. XML based formats require extensive bandwidth. Even with compression, which is currently in operation to support IWXXM over AMHS, the bandwidth increases by approximately 6 times over the legacy TAC format.

2.4.2 The following issues are recommended to the meeting, for appropriate actions, before any actions can be taken with respect to a CRV contract decision:

- a) New and emerging bandwidth requirements (can be provided in phases)
- b) IP address management (VoIP, AMHS, ADS-B, ATFM, etc.)
- c) Bandwidth management/coordination: locations of high bandwidth demand should be identified (e.g., major hubs where messages are stored and distributed) as well as network vulnerabilities. It's noted that a member with 2Mbps cannot add services to another member with 512Kbps bandwidth if the latter's bandwidth is fully utilized.
- d) Security measurements and coordination: there will be public VPNs in addition to CRV being utilized by ANSPs.
- e) Prioritization of messages that are time critical/sensitive (e.g. currently AIDC is time sensitive as it's related to aircraft movement operations)
- f) Coordination of messages delivery: currently, each ANSP has its respective communication center to monitor all messages that are distributed by AMHS. Communication centers should coordinate with one another for any message delivery failures and take appropriate actions. New services, not using AMHS, will need to develop their operational procedures.

2.4.3 The table below depicts a summary of recommended plans and processes required for establishing a new contract or the extension of the current CRV contract for your review and update as needed.

SCHEDULE	NEW CONTRACT PROCESS	EXTEND CONTRACT PROCESS
2024/2025	Issue RFI and review industry response	Issue RFI and review industry response
2025	Members to coordinate with ICAO CDI for funding and schedule requirement	Negotiate pricing for the current services, and potential new services with CRV vendor
2026	Members to provide funding to ICAO and develop Tender Package. Tender Package to be released.	Obtain APANPIRG decision to extend the contract followed by ICAO State Letter to inform decision to extend CRV contract
2027	Evaluation to be completed by end of 2027 as the latest.	
2028	Winning bidder is announced. Members start to transition to new platform as required.	
1/2028	New CRV contract with new provider	
12/2028	Current CRV contract expires.	Current CRV contract expires. Extension of CRV contract to begin

2.4.4 Conclusion/Decision:

Conclusion/Decision XX/XX - CRV CONTRACTUAL LIFE CYCLE AFTER 2028		
What: Initial a study/analysis to determine the optimal service by developing a new CRV tender package for a new contract versus extend the current CRV contract to meet current and future requirements. This includes compiling of new/emerging requirements in the next five to ten years.		Expected impact: <input type="checkbox"/> Political / Global <input type="checkbox"/> Inter-regional <input checked="" type="checkbox"/> Economic <input type="checkbox"/> Environmental <input checked="" type="checkbox"/> Ops/Technical
Why: Current CRV contract is set to expired by December 2028. New/emerging requirement will most likely require additional bandwidth and Service Level Agreement.	Follow-up: <input checked="" type="checkbox"/> Required from States	
When: 1-Feb-24	Status: Draft to be adopted by Subgroup	
Who: <input checked="" type="checkbox"/> Sub groups <input type="checkbox"/> APAC States <input type="checkbox"/> ICAO APAC RO <input type="checkbox"/> ICAO HQ <input type="checkbox"/> Other: XXXX		

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) note the information contained in this paper;
- b) discuss and review the options shared for new CRV contract or extension of current CRV contract; and

- c) discuss any relevant matter as appropriate.
