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Proposal on the review and consideration of the concept of a United Nations information platform serving common needs in collecting and sharing information on near-Earth space monitoring in the interests of the safety of space operations, and its architectural and programmatic aspects

Working paper submitted by the Russian Federation*

1. The present working paper has been prepared in the context of the continuing discussion within the Working Group on the Long-Term Sustainability of Outer Space Activities of the Scientific and Technical Subcommittee on concepts of information support aimed at meeting common needs in the field of safety of space operations and developing procedures for maintaining the informational awareness of States and international intergovernmental organizations of objects and events in outer space.
2. The Russian Federation, having proposed for consideration the basic elements of the concept of establishing a unified centre for information on near-Earth space monitoring under the auspices of the United Nations, as outlined in its working paper A/AC.105/L.290, is of the view that an in-depth examination of the feasibility of a United Nations-centric information hub gathering information on objects and events in outer space from different sources as a tentatively promising means of meeting general needs and aspirations, in particular, the needs of emerging spacefaring States, would be reasonable. The general premise is that the discussion of the virtues that may reside in the potential platform would be without prejudice to the functionality and feasibility of any other forms of developing and leveraging capabilities to support the objective of information-sharing in this area.

* The text of the present document was first made available, in English, as a conference room paper at the fifty-second session of the Scientific and Technical Subcommittee (A/AC.105/C.1/2015/CRP.32).



3. It may be presumed that a United Nations information platform could potentially be accommodated within the Office for Outer Space Affairs of the Secretariat. Therefore, it would be useful to get a better understanding of the capabilities of the Office in order to correlate the current and prospective status of such capabilities with the requirements of establishing a robust management system to serve the needs of administering and sustaining the operational capabilities of a United Nations information platform. Organizational and technical capacities, which, as the case may be, basically exist, would certainly need to be expanded to add functionality to a range of specific procedures and capabilities. Having familiarized themselves with the requirements for potentially realizing the idea of a United Nations information platform, delegations, it is reasonably expected, would be in a position, acting collectively, to examine prospectively this idea, decide on the issue politically and identify a shared standard of action.

4. It is also presumed that the initial implementation phase of establishing a platform may involve gathering, collating and disseminating information on monitoring space objects and events using information connectivity to interested States and authorized users. It may be anticipated that a beneficial combination of factors would probably make it possible — at a later stage — to conceive a more integral concept of producing enhanced information products and providing advanced services based not only on the gathering but also on the fusion of information received from different sources. Any evolutionary development of the architecture of the platform would be contingent on the results of ascertaining baseline issues and the continuing trends and results of discussions thereon.

5. It would be advisable for the Scientific and Technical Subcommittee, or the Committee on the Peaceful Uses of Outer Space, to seek stewardship by the Office for Outer Space Affairs in a well-reasoned analysis of platform-related issues that are within the purview of the Office, and request it to conduct a feasibility study and present the results thereof to the session of the Scientific and Technical Subcommittee to be held in 2016. Such a study would pertain to the initiation-phase architecture of a platform, including the necessary set of techniques and procedures, and address the following specific issues relevant to the architectural and programmatic aspects of establishing a platform:

(a) The use of existing hardware and, if appropriate, the acquisition and installation of other specialized hardware necessary for running software, storing data and organizing communication;

(b) The use of the staff available at the Office for Outer Space Affairs and, if necessary, the engaging (hiring) of additional staff, for the purpose of operating the platform (including the secondment of experts from States on a temporary basis, in accordance with the procedure established at the United Nations), who possess the skills necessary to undertake the tasks of:

(i) Establishing the platform (creating a data warehouse, creating software for administering the warehouse, creating software for administering data, creating software for ensuring access to data, implementing protocols for information interaction of the platform with the suppliers and recipients of information, organizing the system of data security, creating the web interface, and installing and configuring system software);

- (ii) Maintaining the operation of the platform's software (administering the data warehouse, administering the web portal, and administering the security system and system software);
 - (iii) Ensuring the working interaction of the platform with the suppliers and the recipients of the information (information and technical support service);
 - (iv) Administering data stored at the warehouse;
 - (v) Analysing and summarizing data and preparing reports;
- (c) The use of information protocols ensuring the interaction of the platform with the suppliers and recipients of information, based on the internationally applied standard solutions on software and hardware as well as on the approaches to providing each type of information in accordance with existing international standards and recommendations;
- (d) The creation and maintenance of the platform's web portal within the existing website of the Office for Outer Space Affairs;
- (e) The organization of data storage using, if possible, the technologies already applied at the Office for Outer Space Affairs;
- (f) The organization of access to the data, including procedures providing for acquisition of data by recipients upon their request, automatic mailing of data by the platform to recipients, and information accessibility for recipients through the web interface;
- (g) The organization of the transfer of data to the platform and its recording at the warehouse;
- (h) The regulations for the platform's operation;
- (i) The conduct of tests and transfer of the platform into operational mode.
6. It would also be advisable to request the Office for Outer Space Affairs to produce clarifications and/or views regarding:
- (a) Existing and needed capacities for organizing physical channels for transferring information to the platform (dedicated and/or public, terrestrial and/or satellite, etc.);
 - (b) The procedure for the development, coordination, approval and implementation of the technical project of the platform (hardware, information model, the logical and physical models of the data, project on a user interface of the data warehouse, protocols on information interaction, and models of data display forms and statistical forms);
 - (c) Organizational and technical aspects of possible development and adoption of the regulations for the platform's operation, as well as the format and content of an international treaty (operational agreement), with the United Nations and States and international intergovernmental organizations supplying and using information acting as the parties to it.
7. The Russian Federation invites States members of the Committee on the Peaceful Uses of Outer Space to associate themselves with the ideas and proposals

outlined in this working paper so that a consolidated decision may be taken with regard to requesting the above-mentioned feasibility study.
