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Technical Specifications

**PROVISION OF STREAMING SERVICES FOR DELIVERING LIVE MULTIMEDIA
CONTENT**



ΕΛΛΗΝΙΚΗ ΡΑΔΙΟΦΩΝΙΑ ΤΗΛΕΟΡΑΣΗ Α.Ε
ΓΕΝΙΚΗ ΔΙΕΥΘΥΝΣΗ ΤΕΧΝΟΛΟΓΙΑΣ & ΛΕΙΤΟΥΡΓΙΑΣ ΜΕΣΩΝ
ΔΙΕΥΘΥΝΣΗ ΨΗΦΙΑΚΩΝ ΥΠΟΔΟΜΩΝ & ΕΦΑΡΜΟΓΩΝ

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1. SUBJECT OF COMPETITION

In order to ensure the uninterrupted transmission of multimedia content in all digital media of ERT SA, for the live stream (Live) and in order to upgrade the services to higher transmission speeds, greater clarity and reliability of the transmitted audiovisual material, from any global geographical location, the General Directorate of Technology and Media Operations, procures Content Distribution Network Services (Content Delivery Network) with a consumption of at least 100 PB (Volume), with a budgeted expenditure of 214.000€ plus VAT.

2. General Notes.

2	Description	Request	Notes
2.1	All terms are inviolable and failure to comply with even one of these terms entails the automatic exclusion of the participant in the competition.	YES	
2.2	The Technical Committee of ERT SA in the evaluation phase may, if it deems it necessary, to request to see similarly installed and in operation services from the participants, in order to make clear the possibility of the participants to offer similar services among the technically acceptable offers.	YES	

3. Registration.

The award of the service will be awarded to the candidate who will offer the most economically advantageous offer.

4. Material Assembly.

Provision of Content Delivery Services for all the divisions of ERT which Includes Television, Radio for Live broadcasting.

5. Technical Specification.

ERT through its infrastructure will provide the highest quality of the signal in a format at the entry points indicated by the contractor and will be responsible for the Packaging, in different qualities and formats. In addition, the contractor in the solution he will offer he will have the responsibility for the technical parameterization of the solution he proposes in relation to the equipment that ERT will have available.

ERT through its infrastructure will provide one (1) source/quality of live streaming at 8Mbit/s at the entry points indicated by the contractor from two (2) different routes. In addition, the contractor will provide the different material qualities (transcoded qualities) and the different formats (transcoded content) as defined by ERT (Apple HLS, Mpeg DASH, mp4, Transport Stream, etc.).

6. Special Technical Terms.

	Description	Request	Notes
6.1	The service offered must have a proper guarantee of sufficient and stable global geographical coverage where its availability for ERT services can be calculated in principle, as well as the response time of ERT's multimedia material in Greece and on a global level.	YES	
6.2	Description of the backbone networks on which the offered services of the contractor are based, as well as any dependencies from third parties. Provide an interconnection plan for the candidate contractor's backbone network.	YES	
6.3	The contractor to provide 99.99% network availability to	YES	

	ensure that it has adequate infrastructure in equipment and networks. In any case of availability of less than the aforementioned term the contractor is subject to the following clauses:		
6.4	<ol style="list-style-type: none">1. For availability less than 99.9% and up to 99.5%, 1% of the total monthly contract price of this connection.2. For availability of less than 99.5% and up to 99%, 3% of the total monthly contract price of this connection.3. For availability of less than 99% and up to 98%, 10% of the total monthly contract price of this connection.4. For availability of less than 98% and up to 95%, 30% of the total monthly contract price of this connection.5. For availability of less than 95% and up to 90%, 80% of the total monthly contract price of this connection.6. For availability of less than 90%, the total monthly contract price of this connection.	YES	
6.5	To describe in detail the dependencies of the contractor if they exist in areas such as datacenters, what standards it has for the reliability of these areas, what control it has within this area and what uptime/downtime response times it has.	YES	
6.6	The contractor must have presence to the same Datacenter as ERT has (Lamda Hellix) but also in P/M if needed. (Paragraph 5)	YES	
6.7	The contractor must support High Definition Streaming (HD) and 4k with adaptive bitrates in the format requested.	YES	
6.8	The contractor should support the security of interception of multimedia content transmission at the level of domains and sub-domains	YES	
6.9	The contractor must have an alerting system for cases of communication failure between the encoder and the Ingest point of the service. Give a detailed description of the service.	YES	
6.10	The contractor must have an alerting system for emergency events (404/503 errors, etc.).	YES	

6.11	The contractor must have a have a system for measuring the speed at which packets are sent from the encoder to the ingest point (Ingress Bit Rate).	YES	
6.12	Ability to retransmit content in case of encoder downtime (DVR)	YES	
6.13	The contractor to offer automatic failover redundancy at primary/backup encoder level to avoid downtime of the streaming service.	YES	
6.14	The contractor to offer automatic failover redundancy at Datacenter / CDN / Nods level.	YES	
6.15	The contractor to be able to provide Transcoding and Transmuxing services.	YES	
6.16	The contractor to may provide video content storage services in their cloud.	YES	
6.17	The contractor to be able to deliver live and on Demand audio and video broadcasting indicatively in the following encoding types in H.264, H.265, Flash, Windows Media, Silverlight, Quick Time, etc.) in HTTP, MMS, RTMP, SRT, HLS protocols (APPLE), MPG Dash with audio encodings in MP3, HE-AAC, or any other transmission standard requested.	YES	
6.18	The contractor to be able to provide large number of stream channels. At the moment at least 20 streams are required. But it also enables GUI of opening. Ad-hoc streams	YES	
6.19	The contractor must provide analytical statistics tools regarding the live availability of multimedia content to each end user. Information such as number of unique and total users, Geo-specification, Average Playing Time, Views by OS, BROWSER, Device Type, Assets. Categories etc	YES	
6.20	The contractor must support an unlimited number of domains (Domains) as well as sub-domains (Sub domains). to support the transmission of Multimedia in a live, but also on demand case in all current formats that will be requested. Basic obligation of E.R.T. S.A. is to offer one basic standard format for video and one for audio, and the contractor should redistribute it across all media.	YES	
6.21	The contractor must support DVR for at least 48 hrs.	YES	

6.22	The contractor should have the specifications that support the ingest of large volume of content and distribute it with minimal delay to the end users (Low - Ultra Low Latency.) <10''	YES	
6.23	The contractor should be able to intergrade with DRM solutions	YES	
6.24	The contractor must ha a service management portal (Control Panel) for multiple users	YES	
6.25	Live Recording feature than enables the Administrators from ERT to record manually (on – off) and or with scheduler option for 24 hours Ad-hoc streams.	YES	
6.26	History activity of the Users from the ERT Division of the CDN Solution.	YES	
6.27	The CDN to provide security protocols that support geographical identification of each end user to support security mechanisms for VOD and LIVE Streaming which provide the possibility of geographical restrictions of users (GEO FILTERING - GEO BLOCKING) to serve content in relation to its ip user (IP Filtering) as well as the protection of the Streaming link. Security mechanisms should be used by large clients worldwide in the field of media. To mention in detail these mechanisms as well as the way of the implementation.	YES	

7. Support

	Description	Request	Notes
7.1	All services must be accompanied by a certificate of availability (Service Level Agreement), which will guarantee at least 99.99% the availability of these services documented.	YES	

7.2	During the contract any malfunction that is not due to misuse - configuration, will be corrected immediately and at the expense of the contractor. In case of continuous recurrence of malfunctions the contractor accepts the penal clauses as described in clause	YES	
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8. Technical Support.

The CDN to have 24x7x365 technical support for the direct handling of requests (ticket). Describe the experience of the technical support team and state in detail the response time and the methodology that the contractor will follow to manage the requests, supporting an unlimited number of users and an unlimited number of requests. In addition, it is desirable to have a record of past requests.

9. Training.

The contractor is obliged to train two (2) persons from ERT for the use of the offered services. The duration of the training will be two (2) days per seven (7) hours per day. However, the contractor may propose his own training program of at least the same duration as the provision of appropriate certificates.