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WORLD-WIDE NAVIGATION SYSTEM

Additional information about satellite and  
terrestrial-based systems

- 1 At its sixty-first session (7 to 11 December 1992), the Maritime Safety Committee was informed by the Russian Federation of several changes to the information relating to the GLONASS and TCHAIKA systems given in appendix 2 to resolution A.666(16).
- 2 The changes which have occurred with the development of the systems are given in the annex.
- 3 Member Governments are invited to take account of the information contained in the annex when considering resolution A.666(16).

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## ANNEX

## INFORMATION ABOUT SATELLITE AND TERRESTRIAL-BASED SYSTEMS

Information items	GLONASS*	TCHAIKA
1	2	3
Principle including system description	Similar to GPS-NAVSTAR	Similar to LORAN-C
Status of system	Operational test with most part of satellites	3 chains, 15 stations
Estimated date of introduction		
Phase in	1995	In operation
Phase out	-	
Operational control	Russian Federation	Russian Federation
Key elements	Satellites, shore based stations	Shore based stations
No. of satellites	24 (3 spares)	-
Orbit	6 orbits, 19000 km	-
Signal	Published	
Ground segment	Main station, monitor stations	
User segment	Different equipment on the stage of production	Different serial equipment
Availability (system availability) (coverage)	Continuously all over the world	Local coverage continuous
Reliability	High	95% level of probability

Information items	GLONASS*	TCHAIKA
1	2	3
Accuracy	General users 100 m(2DMRS) Differential mode will be available in selected areas	50-200 m
Estimated lifetime	At least until year 2010	Until year 2005
General limitations	No limitations	No limitations
User limitations	No limitations	No limitations
Redundancy	High	High
Additional service	Local differential services (e.g. VTS) Under consideration	-
Installation costs	Borne by Russian Federation	Borne by Russian Federation
Operating costs per year	No user fee	No user fee
Property rights and patents	-	-
Number of world users	Some vessels	Approx. 1300
Growth of users	Expected	At least 10% annum
Development	Second phase of development	Ground station equipment and receivers - continued

\* Details of the GLONASS system may be obtained from: GLONASS Co-ordination Scientific Information Center (CSIC), 103160, Moscow, Russian Federation.