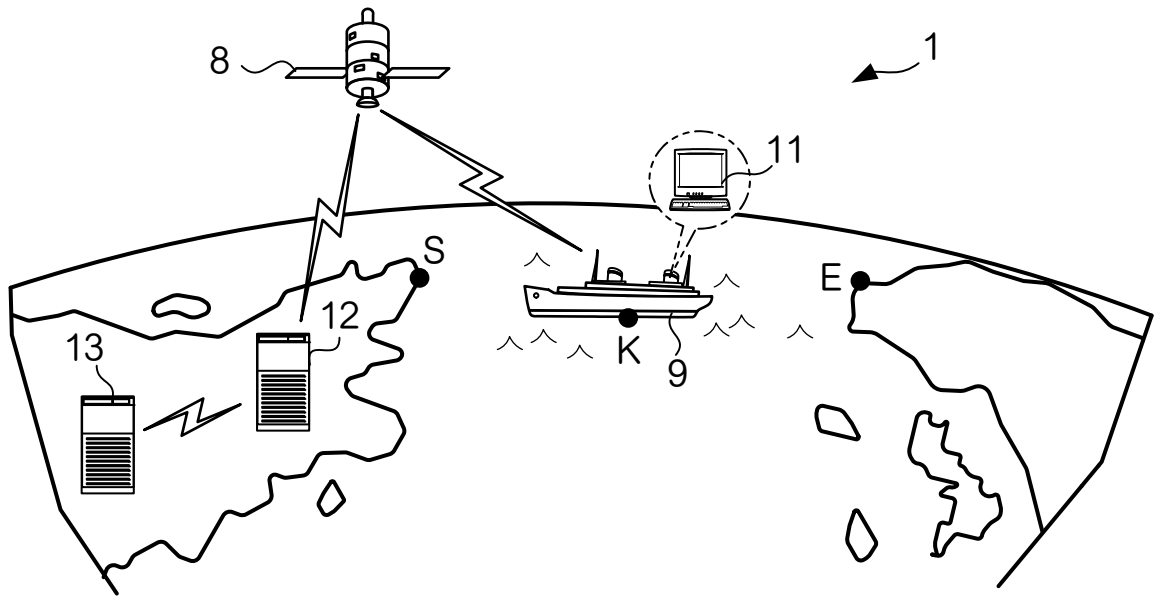
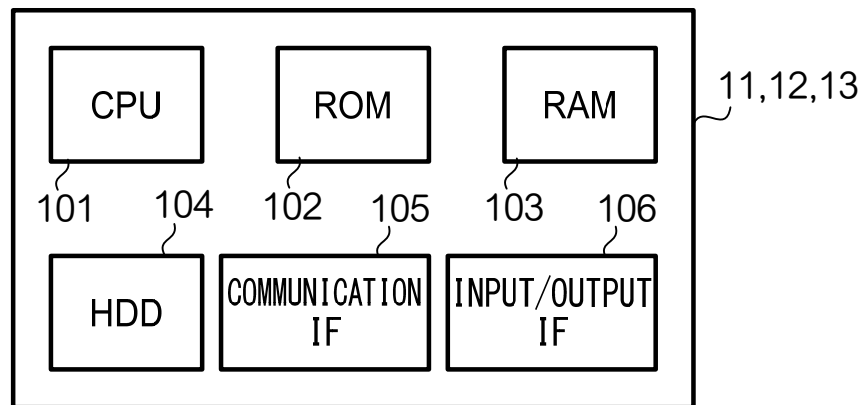


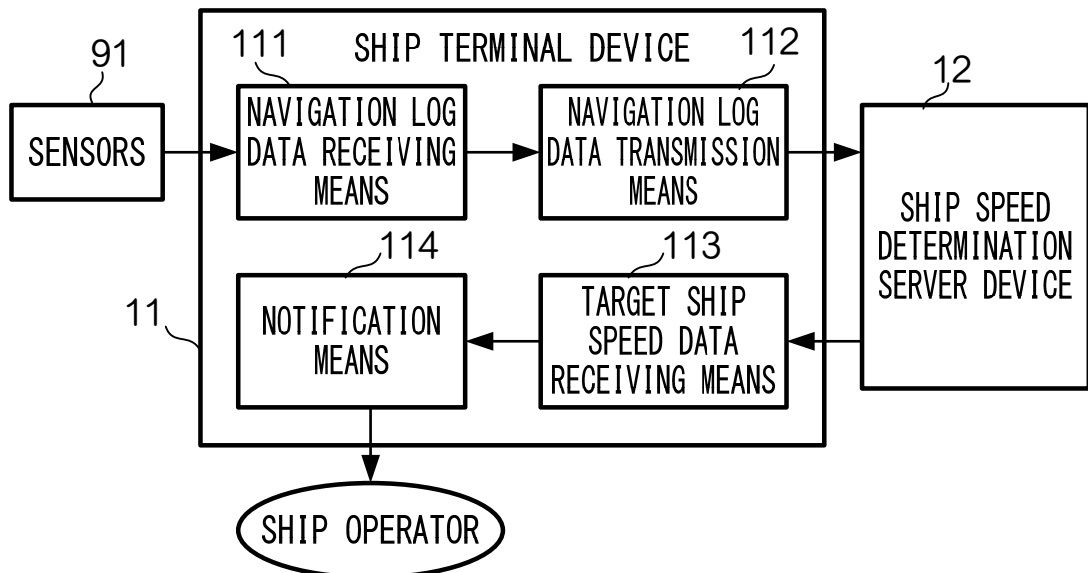
[FIG.1]



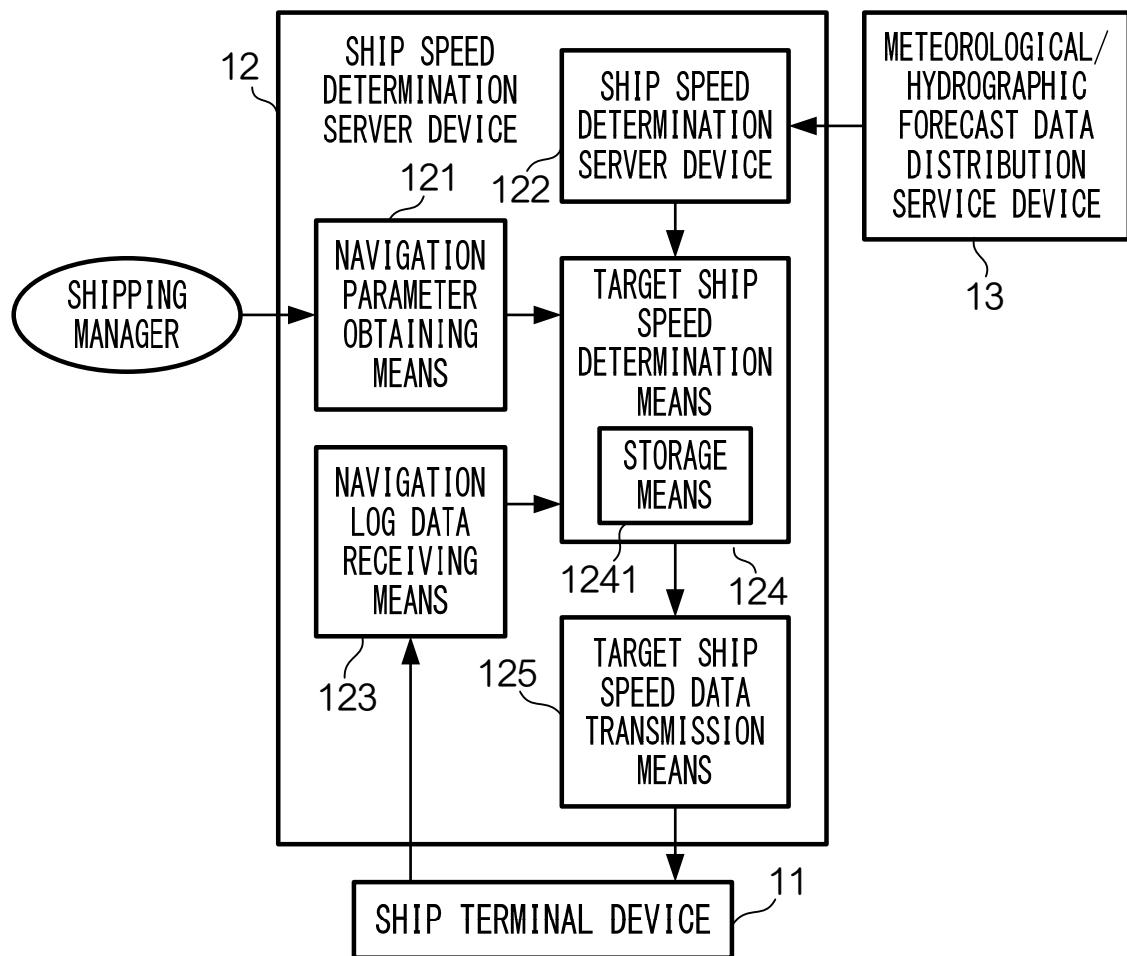
[FIG.2]



[FIG.3]



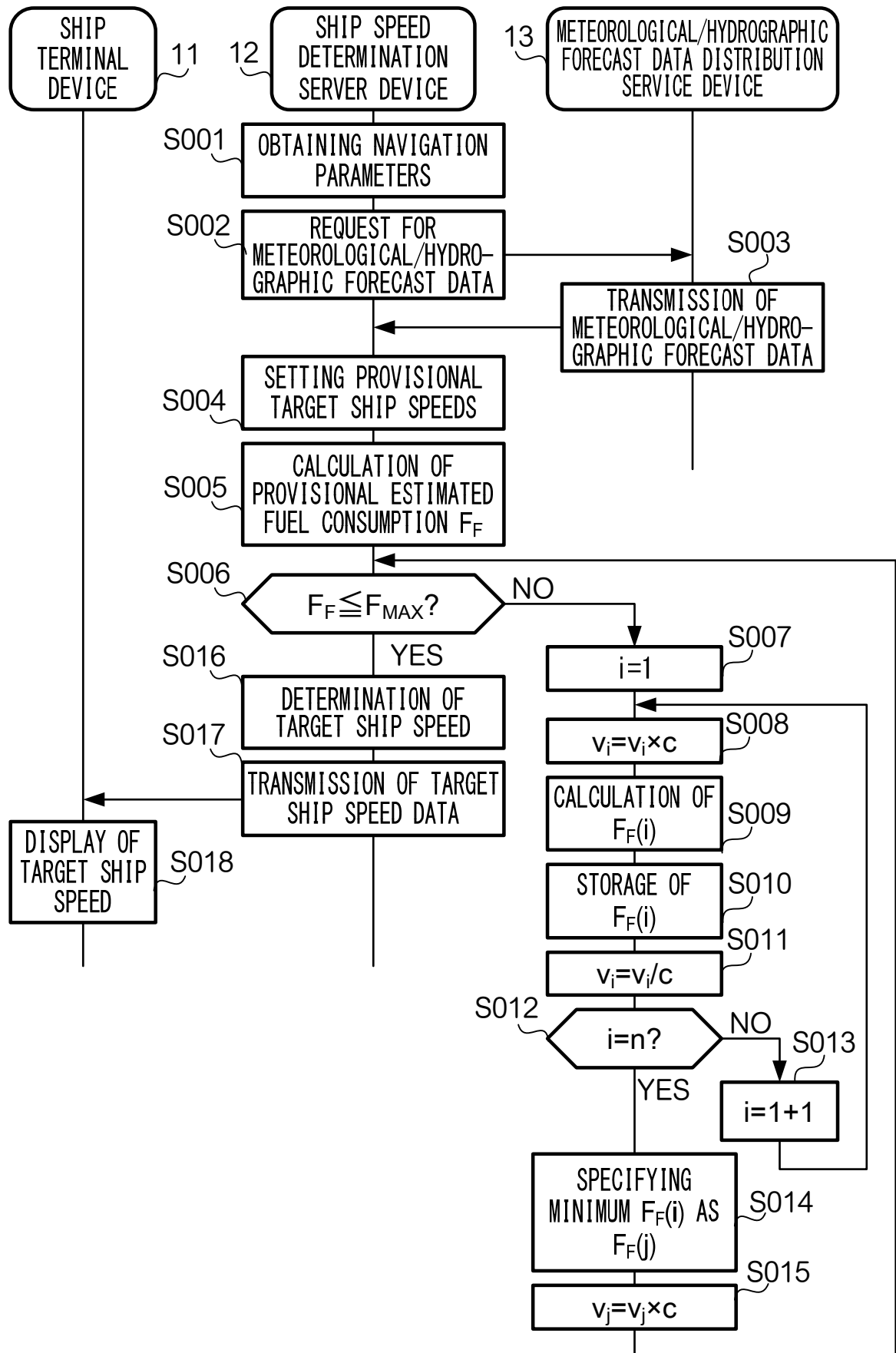
[FIG.4]



[FIG.5]

⋮ ⋮ ⋮	⋮ ⋮ ⋮	⋮ ⋮ ⋮	WIND DIRECTION
⋮ ⋮ ⋮	⋮ ⋮ ⋮	⋮ ⋮ ⋮	WIND SPEED
⋮ ⋮ ⋮	⋮ ⋮ ⋮	⋮ ⋮ ⋮	WAVE HEIGHT
⋮ ⋮ ⋮	⋮ ⋮ ⋮	⋮ ⋮ ⋮	WAVE DIRECTION
⋮ ⋮ ⋮	⋮ ⋮ ⋮	⋮ ⋮ ⋮	WAVE PERIOD
⋮ ⋮ ⋮	⋮ ⋮ ⋮	⋮ ⋮ ⋮	TIDE SPEED
⋮ ⋮ ⋮	⋮ ⋮ ⋮	⋮ ⋮ ⋮	TIDE DIRECTION
⋮ ⋮ ⋮	⋮ ⋮ ⋮	⋮ ⋮ ⋮	DRAFT
⋮ ⋮ ⋮	⋮ ⋮ ⋮	⋮ ⋮ ⋮	TRIM
⋮ ⋮ ⋮	⋮ ⋮ ⋮	⋮ ⋮ ⋮	HULL FOULING
⋮ ⋮ ⋮	⋮ ⋮ ⋮	⋮ ⋮ ⋮	PROPELLER FOULING
⋮ ⋮ ⋮	⋮ ⋮ ⋮	⋮ ⋮ ⋮	PROPELLER ROTATION SPEED
⋮ ⋮ ⋮	⋮ ⋮ ⋮	⋮ ⋮ ⋮	SHIP SPEED OVER GROUND
⋮ ⋮ ⋮	⋮ ⋮ ⋮	⋮ ⋮ ⋮	FUEL CONSUMPTION RATE

[FIG.6]



[FIG.7]

	S	LEG (1)	LEG (2)	LEG (3)	...	LEG (n)	E
DISTANCE		l_1	l_2	l_3	...	l_n	
SHIP SPEED		v_1	v_2	v_3	...	v_n	
VOYAGE TIME		T_1	T_2	T_3	...	T_n	
ARRIVAL TIME	t_0	t_1	t_2	t_3	...	t_{n-1}	t_n
ENVIRONMENT PARAMETERS		E_1	E_2	E_3	...	E_n	
FUEL CONSUMPTION		f_1	f_2	f_3	...	f_n	

[FIG.8]

CURRENT SHIP SPEED

###

knot

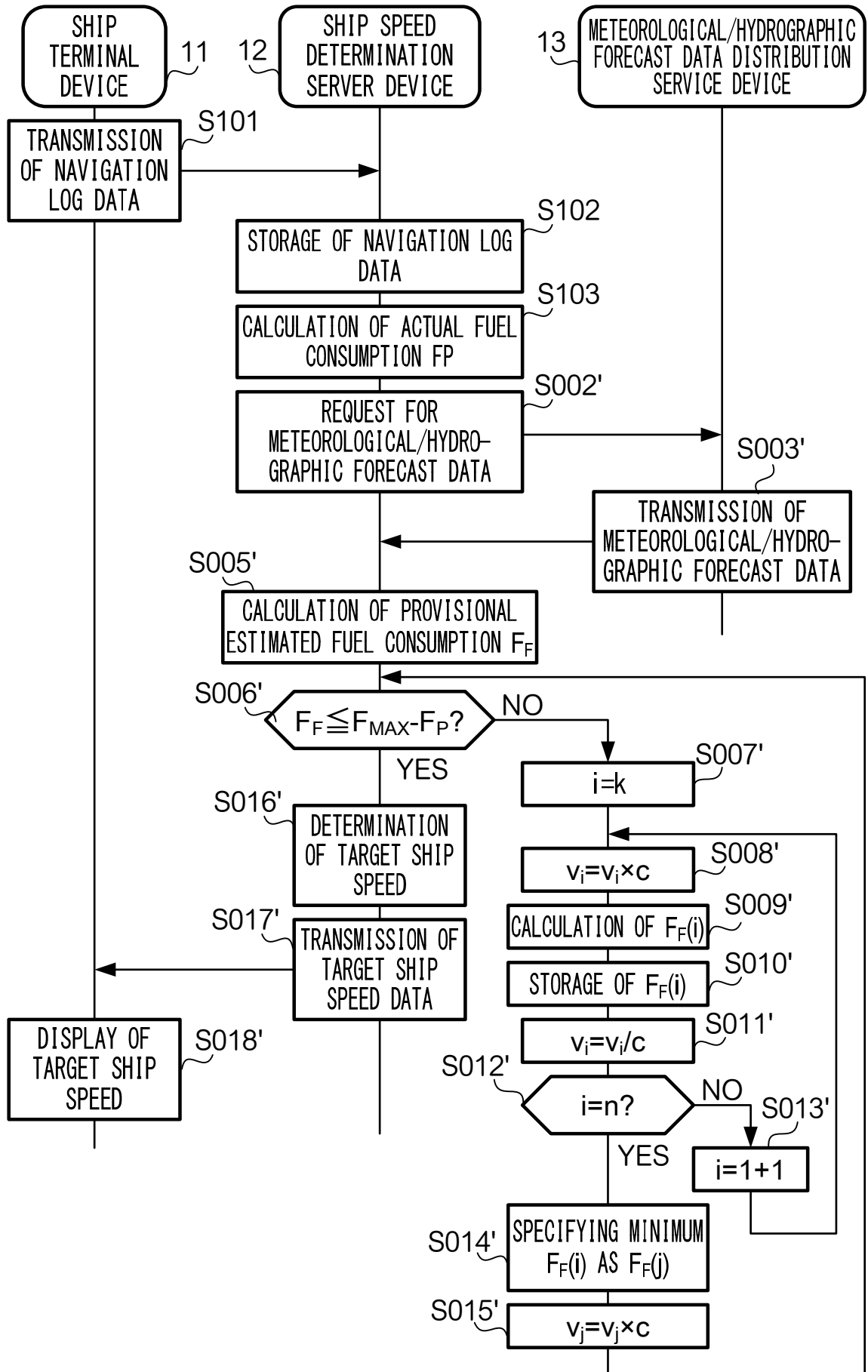
TARGET SHIP SPEED

###

knot

SHIP SPEED SHOULD BE INCREASED.

[FIG.9]



[FIG.10]

