TECHNO Multi Utama

PENAWARAN HARGA RADAR ARPA SIMULATOR

NO.	SPESSIFIKASI PEKERJAAN	QTY	SAT
A	**SOFTWARE RADAR ARPA SIMULATOR**		
	Instructor Station Radar Arpa Simulator		
1	**Instructor Radar Arpa** 1.1 Instructor can Launch, Pause, Resume exercises including replays. Some of the available features for control and monitoring during exercises include: - Control and monitoring of the available environmental conditions such as current, visibility, wind, swell, precipitation, and clouds - Monitoring of the own-ship and target ship parameters - Start, stop, pause, and restart of exercises - Control of the target ship shapes, signals, and lights - Control for target ships' course and speed	1	Lot
	1.2 Assesment Tool - The assessment module is designed based on the abilities of the trainees. This assessment system is based on the individual's ability to weigh and behave according to operational needs in the field in 'real time'. This learning mode uses various assessment methods in the form of numbers to assess and measure the ability of each training participant.	1	Lot
	1.3 Excersise Resource : - 3 Indonesia Sailing Area (Tj. Priok, Tj Perak, Selat Sunda) - 2 International Sailing Area (Singapore, Selat Malaka) - 10 Ownship - 25 Target Vessel - 5 Paper Chart of Sailing Area for each trainee	1	Lot
	Trainee Station Radar Arpa Simulator		
3	**RADAR/ARPA** Primary features of the Radar/ARPA Simulator: - Understanding Characteristics of radar sets and factors affecting performance - Set up and maintain radar display o Switch Standby – On o Alter pulse length o Adjust controls to give an optimal picture (tuning, gain etc.) o Adjust display controls (brilliance, range selector, range ring, VRM, EBL, heading marker, anti-clutter etc.) o Adjust display modes (true motion, relative motion – unstabilised, relative motion – stabilized, north up, course up, head up) o Verify compass input for relative stabilized display, and compass and log input for true motion display o Use centre offset, centre reset functions o Set and alter range scale o Measure ranges and bearings - Perform manual radar plotting: o Determine course, speed and aspect of other ships o Determine CPA and TCPA - Fix vessels position by radar - Identify aids to radar navigation and safety - Use parallel indexing in radar navigation - Use Radar to Avoid Collisions or Close Encounters - Observe the effect of precipitation on radar detection	7	Lot

- Identify blind areas and shadow areas
- Observe how clutter may mask targets (sea clutter, rain clutter)
- Set up and maintain an ARPA display
- Acquire targets using ARPA function
  - o Use auto-acquisition zone(s)
  - o Delete acquired targets
- Observe processing delays in obtaining target information
- Obtain target information
- Use ARPA to assist in applying COLREGS
- Observe and interpret True vectors and Relative vectors
- Use target history display
- Observe and interpret warnings and alarms related to Radar and ARPA functions
- Use performance monitor
- Set up and use a PI line
- Use Nav Marks function
- Interpret real motion of vessel from a tracked echo
- Observe factors which might cause faulty interpretation of the radar picture, for example, interference, side echoes, multiple echoes, second trace echoes, etc.

Visualisation

The own ships and target vessels are provided with realistic 3 Dimensional bow wave and propeller wash. The

The primary elements of the visualisation scenario include the following:

- Own ship deck view as seen from the 'Bridge Portholes'
- Own ship views (wings, stern etc.) as seen from the Bridge using panning function
- Water surface
- Sky - Variable appearance with cloud cover, time of day
- Target vessels
- Navigation objects
- Land / Shore
- Lights
- Variable visibility – rain, snow, mist fog
- Wipers
- Variable ambient lighting – day, dusk, dawn, night
- Smoke, Fire, oil spill
- 3D depth perception of objects
- Varied colours and textures of objects
- Shadows

Conning & Communication

Own Ship controls and displays include:

- Rudder controls and indicators
- Rate of Turn indicator
- Magnetic compass and Gyro compass repeaters
- Engine controls including RPM and thruster control
- Doppler Log
- Time, wind, distance sailed, depth indicators
- Own ship navigational lights display control
- Own Ship Fog Horn (Auto/Manual) controls
- Pilot card and Manoeuvring characteristics for own vessel
- Engine Alarm Panel
- Engine Control Panel
- Telegraph control display (for engine speed/direction control)
- VHF

B	**HARDWARE RADAR ARPA SIMULATOR**		
	Instructor Station Radar Arpa Simulator		
1	**Instructor Station**		

	- Intel I Core 7, 8 GB RAM, 1TB Internal HDD, Nvidia Graphic Card - Windows 10 (64 bit)	1	Unit
	- Monitor LED 24"	2	Unit
	- Keyboard + Mouse	1	Unit
	- Printer (Print, Scan, Copy)	1	Unit
	- Headset	1	Unit
	Trainee Station Radar Arpa Simulator		
2	**RADAR ARPA**		
	- Intel I Core 5, 4GB RAM, 1 TB Internal HDD – Windows 10 (64bit)	7	Unit
	- Monitor LED 24"	2	Unit
	- Radar Keyboard	7	Unit
	- Speaker 2.0	7	Unit
3	**VISUALISATION/COMMUNICATION**		
	- Intel I Core 7, 8 GB RAM, 1TB Internal HDD, Nvidia Graphic Card - Windows 10 (64 bit)	7	Unit
	- Monitor LED 24"	14	Unit
	- Headset	7	Unit
4	**CONNING**		
	- Intel I Core 5, 4GB RAM, 1 TB Internal HDD – Windows 10 (64bit)	7	Unit
	- Monitor LED 24"	2	Unit
	- Telegraph	7	Set
	- Main Steering Wheel	7	Unit
5	**ROOM SETUP**		
	- Mock up, Console & Chart Table	1	Lot
	- Instructor Furniture	1	Set
C	**ELECTRICAL & NETWORKING RADAR ARPA SIMULATOR**		
1	**Switch 24 Port** Standards and Protocols: IEEE 802.3, IEEE 802.3u, IEEE 802.3ab , IEEE 802.3x Interface: 24 10/100/1000Mbps RJ45 Ports (Auto Negotiation/Auto MDI/MDIX) Network Media: 100BASE-TX, 1000BASE-T : UTP CAT 5/5e (maximum 100m) EIA/TIA-568 100-ohm STOP (maximum 100m) RAM Buffer : 3.5 Mbits Power Supply: 100-240VAC, 50/60Hz Power Consumption: Maximum: 15.7 Watts	1	Unit
2	**UPS 1600 VA**	22	Unit
3	**AC 2 PK**	1	Unit
4	**Networking and Power Distribution**	1	Lot
5	**Student Chair**	7	Unit
6	**CCTV**	1	Set

Paket pekerjaan Radar Arpa Simulator ini kami tawarkan dengan harga Rp 5.750.000.000,- (Lima Milyar Tujuh Ratus Lima Juta Rupiah) , include tax dan instalasi di on site

Cimahi, 3 Januari 2022

TECHNO Multi Utama

Bagus Winarno
Dirut