

PROJECT TEAM LEADER AND MEMBERS

Please provide the following details below:

- A) Name
- B) Designation
- C) Education / Professional Qualifications
- D) Department
- E) Organisation
- F) Postal Address
- G) Tel No.
- H) Email Address

Please provide details of Research, Scientists and Engineers (RSEs) participating in the project, indicate the Names, whether Existing/New hire.

IIC TECHNOLOGIES LTD

A)	Name	Jonathan Pritchard & Edward Kuwalek
B)	Designation	Senior Technical Manager & CTO
C)	Education / Professional Qualifications	
D)	Department	
E)	Organisation	IIC Technologies Ltd
F)	Postal Address	Suite 303, 1124 Lonsdale Ave, North Vancouver BC V7M 2H1 Canada
G)	Tel No.	Tel. : +44 7464 371695
H)	Email Address	Jonathan.Pritchard@IICTechnologies.com/Edward.Kuwalek@IICTechnologies.com

NTOU (ENC Centre)

A)	Name	SHWU-JING CHANG
B)	Designation	Distinguished Professor (Director of ENC Centre, NTOU / Technology Director of Taiwan ENC Center)
C)	Education / Professional Qualifications	Ph.D. in Electronics Engineering
D)	Department	Dept. of Communications, Navigation and Control Engineering
E)	Organisation	National Taiwan Ocean University
F)	Postal Address	2, Pei-Ning Rd., Keelung, 20224 Taiwan
G)	Tel No.	+886-930310620
H)	Email Address	sjchang@email.ntou.edu.tw

Research Engineers participating in the project from ENC Centre, NTOU

Shih-Ming CHANG and Yong-Jiang WU

They are both "Mater in Communications, Navigation and Control Engineering" and have more than 5 years working experience in application software development. They are both quite experienced in developing web-based application systems. Some of the applications developed have functionalities similar to those required in this S-131 project.

Incentive/Funding/Similar project

One of the projects ongoing in ENC Centre (NTOU) is in cooperation with Taiwan ENC Centre under the Ministry of the Interior (MOI), thus funded by the MOI. This is the 2nd year of a 4-year project focusing on S-100 data production, technology development, cooperation and infrastructure building. Participation of NTOU in this S-131 project matches NTOU's existing research plan, therefore could be mostly self-funded.

PROJECT TEAM AND MEMBERS

Norwegian Hydrographic Office

A)	Name	Matilde Skjæveland Skår
B)	Designation	Senior engineer responsible for supervision and facilitation. Project leader for the Norwegian port data Product specification
C)	Education / Professional Qualifications	Master in geography
D)	Department	Department of supervision and facilitation
E)	Organisation	Norwegian Hydrographic Office, Kartverket - Norwegian Mapping Authority
F)	Postal Address	Professor Olav Hanssens vei 10, 4021 Stavanger, Norway
G)	Tel No.	+47 47859667
H)	Email Address	Matilde.skar@kartverket.no

LLC Member/Manager

A)	Name	Raphael Malyankar
B)	Designation	LLC Member/Manager
C)	Education / Professional Qualifications	Ph.D. (Computer Science)
D)	Department	
E)	Organisation	Portolan Sciences LLC
F)	Postal Address	995 E Baseline Rd #2146 Tempe AZ 85283, USA
G)	Tel No.	+1.480.491.3997
H)	Email Address	raphaelm@portolansciences.com

Raphael Malyankar is the current developer of the S-131 Edition 1.0.0 Product Specification. He has experience in software architecture and design, GML, XML authoring and publishing frameworks, interface design, databases, and information modelling. He has work experience in both industry and academic research.

PROJECT TEAM LEADER Canadian Hydrographic Service

A)	Name	Sarah Rahr
B)	Designation	Project Supervisor, Sailing Directions Chair of National Canadian SDWG
C)	Education / Professional Qualifications	Cartography
D)	Department	Sailing Directions
E)	Organisation	Canadian Hydrographic Service
F)	Postal Address	1 Challenger Dr, Dartmouth, NS B2Y 4A2 Canada
G)	Tel No.	902-478-3524
H)	Email Address	Sarah.Rahr@dfo-mpo.gc.ca

PROJECT SCHEDULE

Please provide details on the following:

A) Detailed project work plan

Design database infrastructure: 3 months

Design GUI: 3 months

Design API: 3 months

Testing phase: 3 months

Operate in a beta mode with programming support: 2 years

B) Overview in Gantt Chart format

(Applicant May Submit a Separate Attachment for the Gantt Chart)

	Year 1 Q1	Year 1 Q2	Year 1 Q3	Year 1 Q4	Year 2	Year 2	Year 3	Year 3	Parties Involved
Design database infrastructure									<ul style="list-style-type: none"> Development team plus advisors
Design API									<ul style="list-style-type: none"> Development team plus advisors
Design GUI									<ul style="list-style-type: none"> Development team plus advisors
Testing phase REVISED = ■									<ul style="list-style-type: none"> Development team, Ports and relevant HOs
Operate in a beta mode with programming support									<ul style="list-style-type: none"> IHO Lab, ports, HOs and development team

SUMMARY OF PROJECT COSTS (To Indicate Cash or In-Kind)

Qualifying Project Costs		Cost of Item €K	Collaborator Contribution (If Any) €K
Category*	Details of Items		
Manpower (Please provide itemised details and budget breakdown)	1 project lead and 2 programmers (±€40K funded by NTOU)	In-kind	In-kind from NTOU
	1 architect/Lead developer		70€K per year (for the first 2 years) from CHS Canada
	1 programmer/developer	€70K	
	Documentation of operating and training manuals for port and HOs	€10K	
	Implementation and testing coordination and support for ports and HOs	€40K	
	S-131 updates	€10K	
Project documentation	€10K		
Equipment (Please provide itemised details and budget breakdown)	Hosting server, backup and maintenance (probably cloud based)	€14K	Request to IHO Lab
Other Operating Expenditure (Please provide itemised details and budget breakdown)	IT support	€10K	Request to IHO Lab
Total €K		€164K	

*The Cost of Item indicated shall include any Collaborator Contribution(s) obtained for the same item.

*The Governing Board needs to discuss what are the qualifying expenses eligible for co-funding.