CELTIC EUROGIA
Online Proposers Day

15th & 16th September 2020

Underwater Wireless Communications

High Data Rate Ultrasonic Communications(HDRUC)

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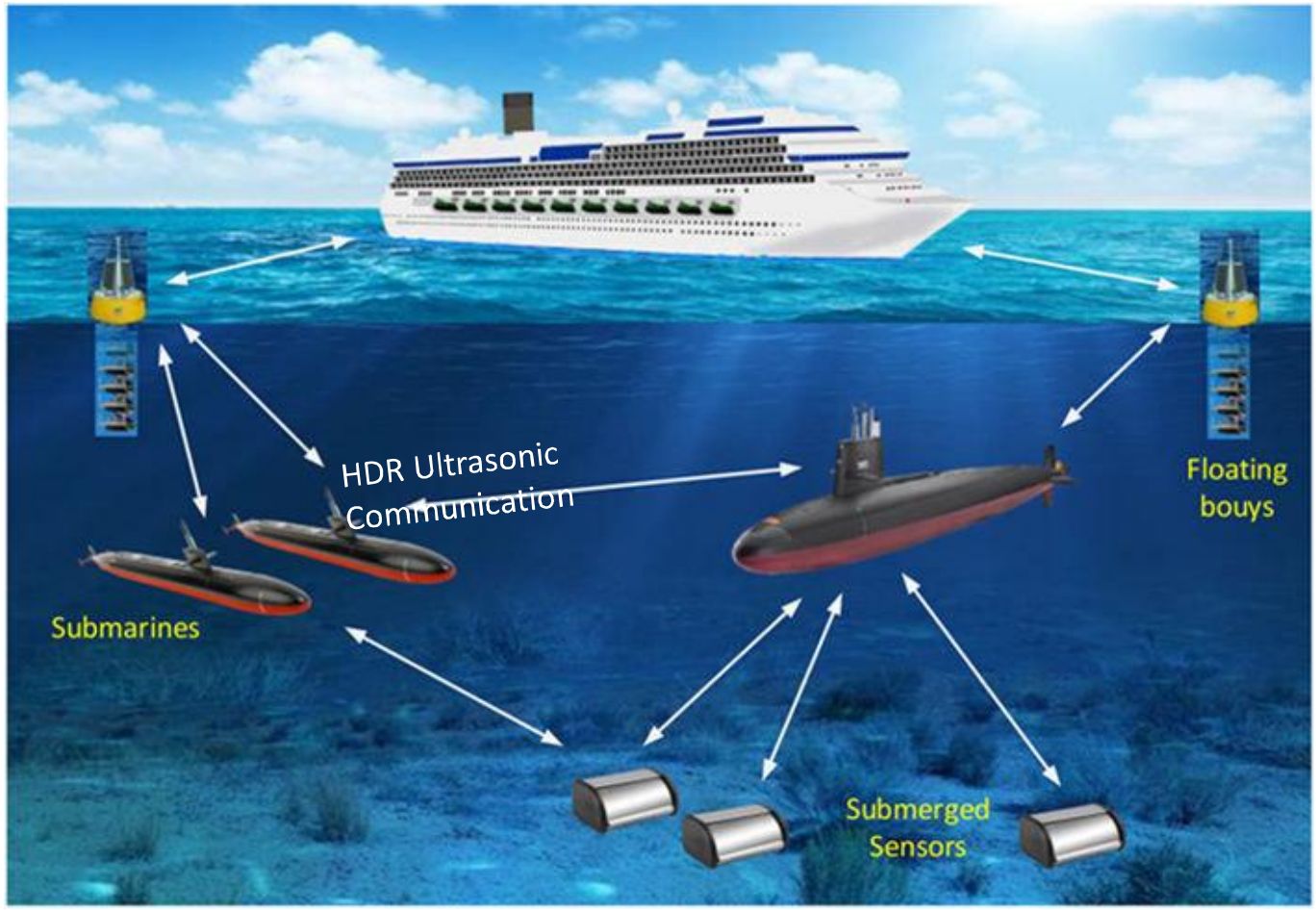
Teaser

1 slide:

No wire tethered underwater vehicles
Wireless Network for Sensor Tags on Ocean Floor
New Adventure for Ocean Floor

Underwater High Data Rate(HDR) Ultrasonic Communications



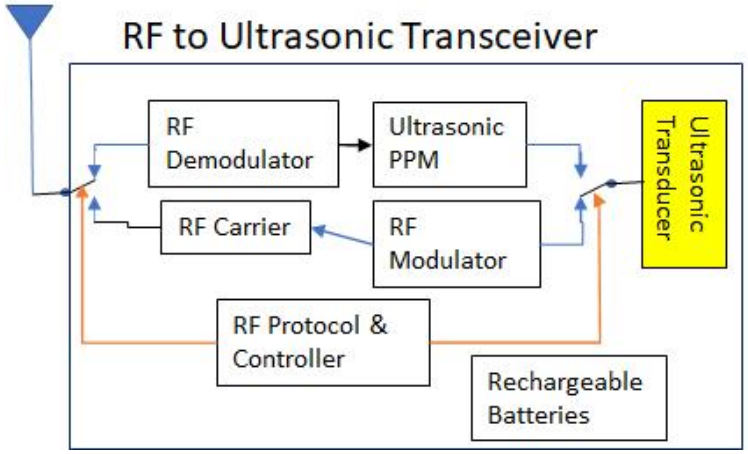
Organisation Profile

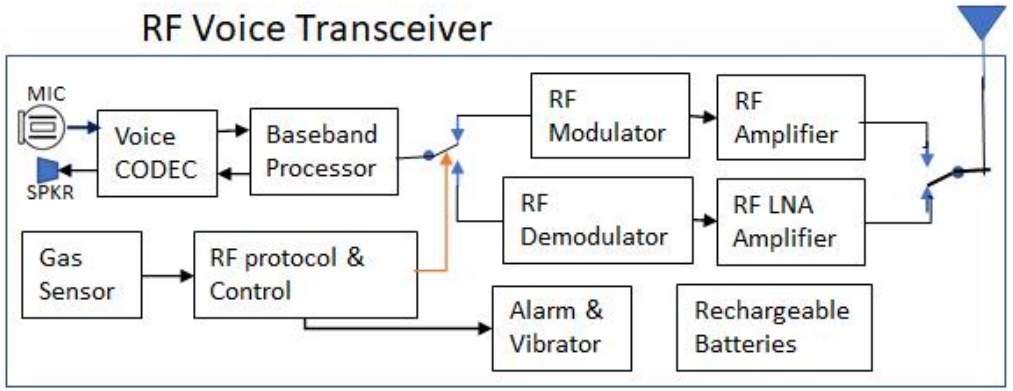
YIRURI CO. LTD
CEO: Dr. K S Jeon
  –PhD from University of Illinois USA
  –30 years research at NASA
HQ and Yiruri Research Institute of Technology: Busan South Korea
Branch Off: Ulsan Korea, New York USA
No. of Employee: 4
Founded: 2017
Patents Obtained: 2 in Korea, 1 in USA
Company Research Institute and Venture Company are recognized by the Government
Total capital Asset: $100,000
Company Web Site: www.yiruri.com
Owned 8 innovative technologies

Proposal Introduction

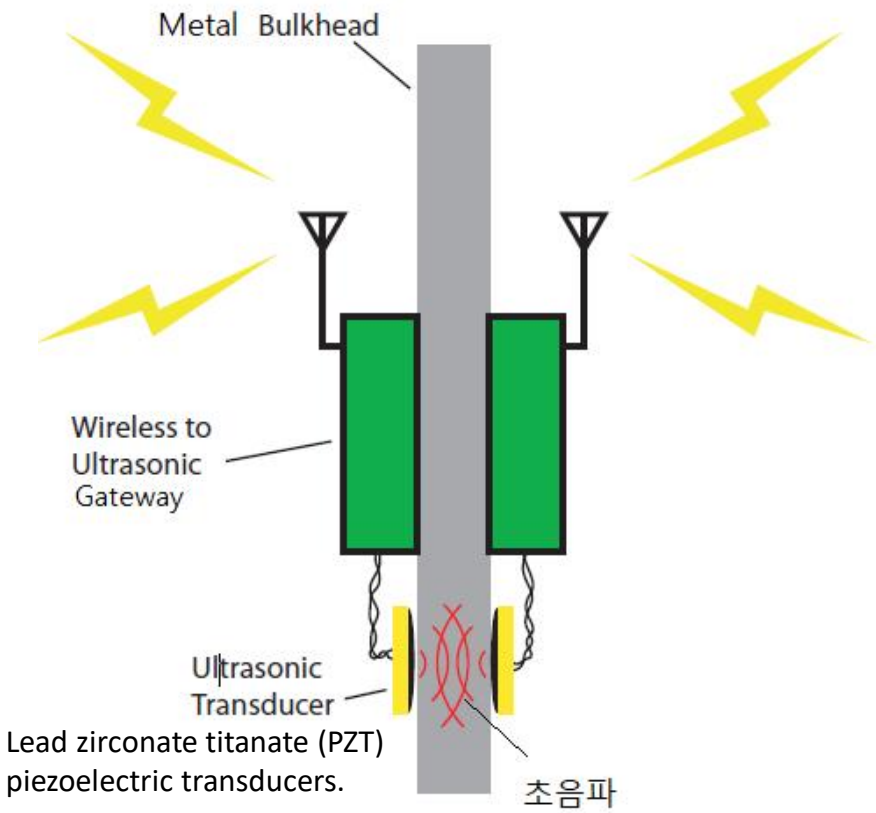
Develop RF Comm based Ultrasonic Comm MODEM Technology

Develop Metal Block Container Ultrasonic Transceiver with Air Quality Monitoring





Communication Through Metal Block Container



- Communication through Metal Confinement without damaging to the metal structure
- Ultrasonic Wave can transmit through meta wall
- Use Ultrasonic Transducer (Example: the Panametrics NDT A112s 1/4" contact transducer) to cross over the metal wall
- Gateway는 RF Transceiver + Ultrasonic Transducer.
- The Gateway may contain VOIP module to handle voice.

Proposal Introduction

We will achieve the following:

1. *Easy and Safe Operation of Ocean Exploration with Wireless Communications*
2. *Untethered Operation of Undersea vehicles*
3. *Monitoring and Control of Undersea Valuable Resources*
4. *Develop High Data Rate Digital Ultrasonic Comm Modulation Demodulation and Multiple Access Technologies*

Potential
Work Packages

We see the following activities:

1. *Underwater channel characterization, statistical modeling and estimation*
2. *MIMO and Multi-Carrier systems in underwater communications*
3. *Transceiver design: Modulation, coding and detection technique*
4. *Underwater wireless networking protocols and cross-layer design*
5. *High Data Rate Underwater Wireless Communication Test Bed Construction*

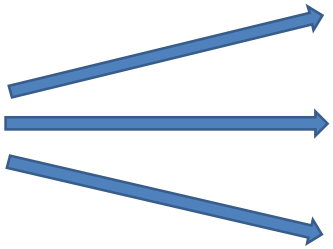
Partners

1 slide:
Existing consortium, involved countries.
Expertise, profiles and types of partners you are looking for.

Currently No Underwater wireless Communication Standard Organization or Consortium exist.
Need to initiate the standard organization from the beginning of the development.

ICT for Undersea

Please choose :



ICT

Green Energy

I don‘t know

ICT for Undersea

Consortium Building Session

Sessions are scheduled to 21/09 and 23/09 /2020 starting at 09:00CET

https://www.celticnext.eu/event/celtic-eurogia-proposers-days-15th-16th-of-september-2020/

Contact Info

For more information and for interest to participate please contact:

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Presentation available via: