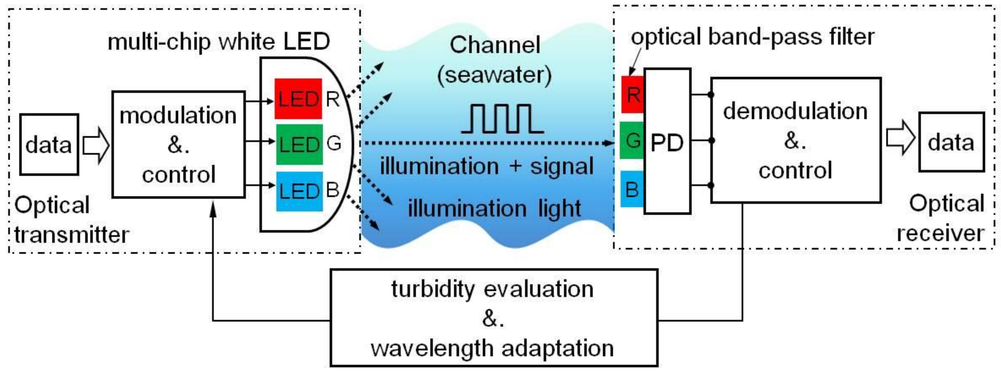
# 可視光LEDを用いた適応型水中無線通信

## Adaptive Control for LED-based Underwater Wireless Communications Using Visible Light

株式会社インターエナジー
Inter Energy Co., Ltd.

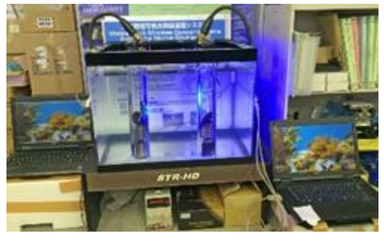
国立研究開発法人 海洋研究開発機構
JAMSTEC
Japan Agency for Marine-Earth Science and Technology

## 原理と特長　Principles and Features




- **白色LEDを用いることで通信と照明の併用が可能;**
  White LED is used for illumination and communications at same time.

visible-light transceiver prototype

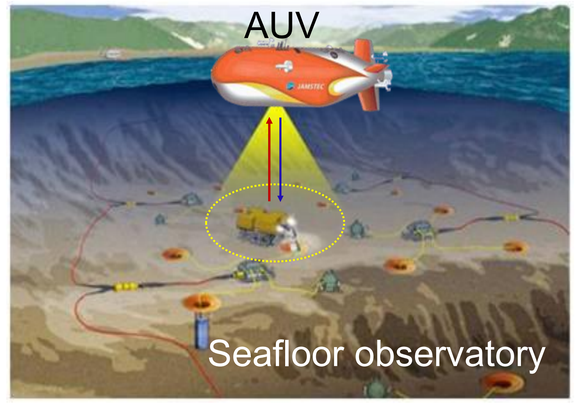


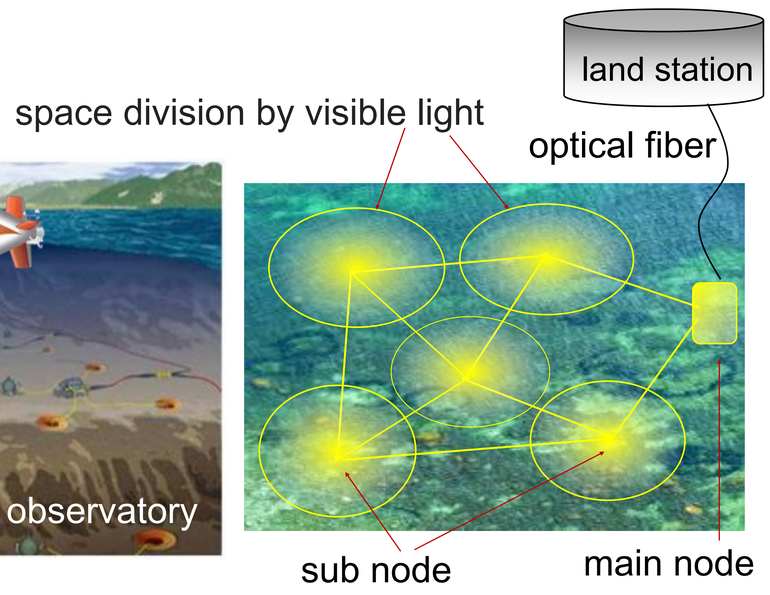
Blue Channel

Red + Green Channel

- **海水濁度変化適応な波長制御;**
  Wavelength adaptation for seawater-turbidity change.
- **画像データ伝送可能な4Mbpsの帯域幅.**
  Bandwidth of 4Mbps for image transmissions.

- **水中移動体と海底観測ステーションの間に高速なデータ伝送**
  High-speed underwater data transmissions between the AUV and the seafloor observatory.
- **水中光無線センサーネットワークを構築**
  Underwater optical wireless sensor networks




## 応用分野　Applications

- **株式会社インターエナジー　技術部**
  Technical Division, Inter Energy Co., Ltd.
- **〒222-0033　横浜市港北区新横浜3-20-12新横浜望星ビル4F**
  Shin-Yokohama Bousei Building 4F, 3-20-12 Shin-Yokohama, Kouhoku-ku, Yokohama, 222-0033, Japan
- xinlin@interenergy.jp, http://www.interenergy.jp