

Webcam monitoring sites



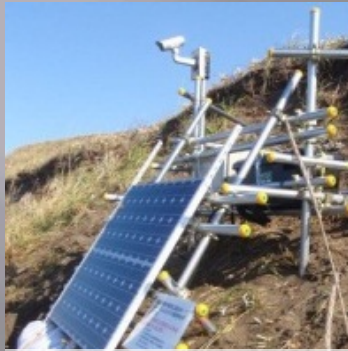
(a) Tsushima



(b) Wajima



(c) Tobishima



(d) Wakkanai



(e) Ishigaki



(f) Tanegashima



(g) Muroto

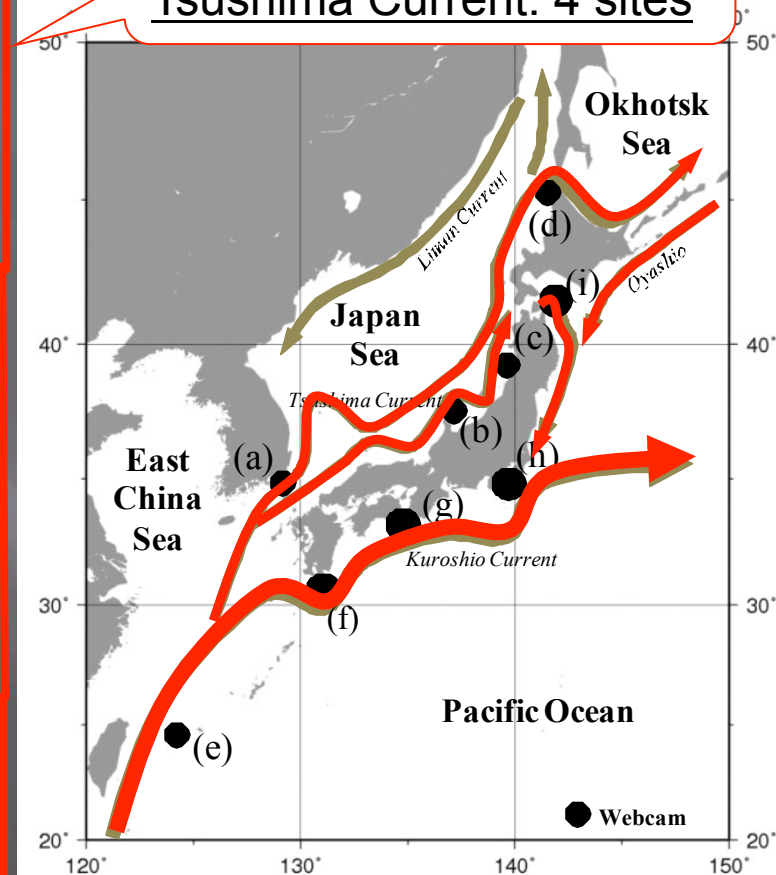


(h) Niijima



(i) Shiriya

【Today's topic】
Tsushima Current: 4 sites



Tsushima current: 4 sites
Kuroshio current: 4 sites
Oyashio: 1 site

Webcam monitoring system

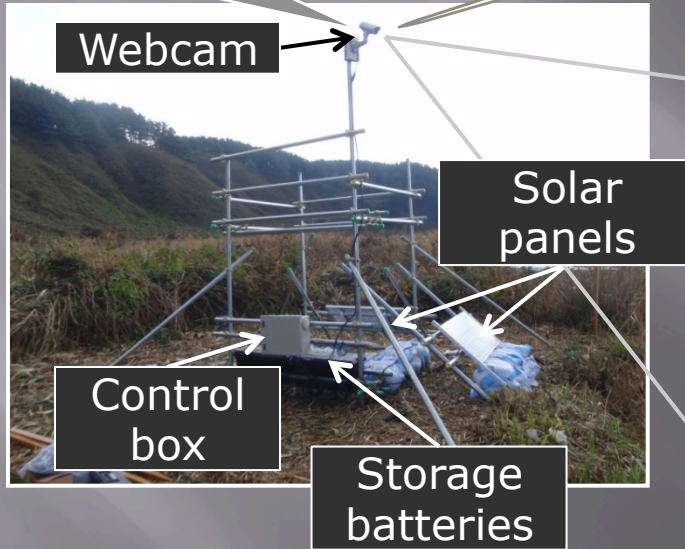
The webcam monitoring system

Saving in a built-in
local storage
(SDHC card, 32GB)

Transmission via
the Internet



Our laboratory in
NILIM

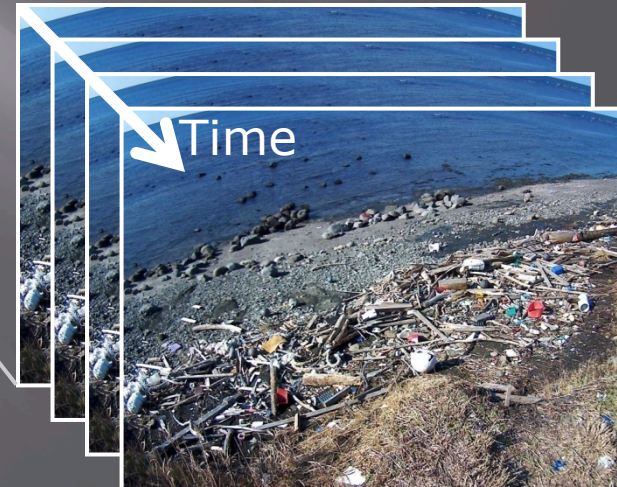


Webcam

Solar
panels

Control
box

Storage
batteries



Time

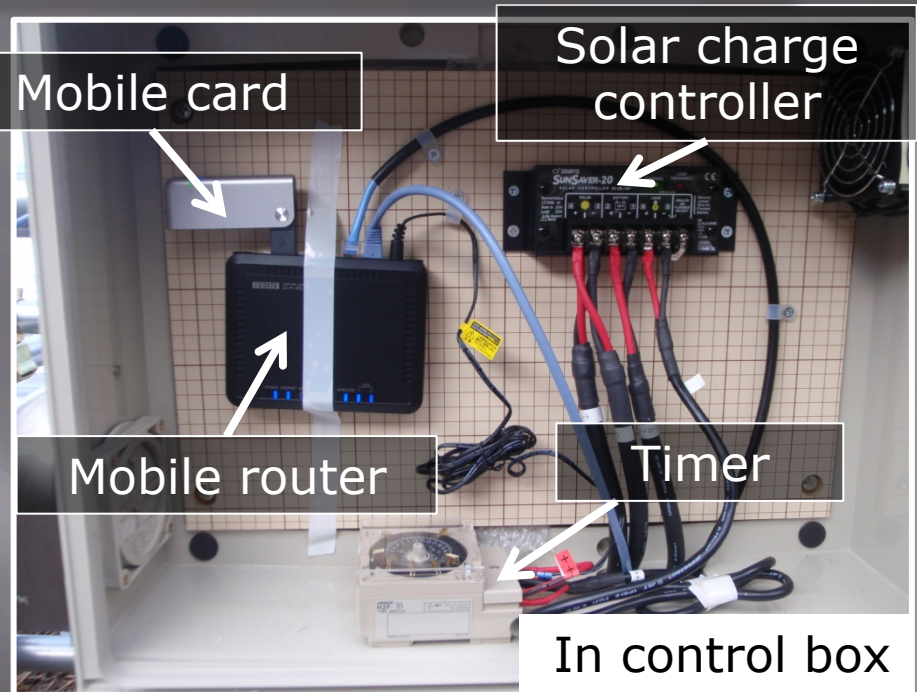
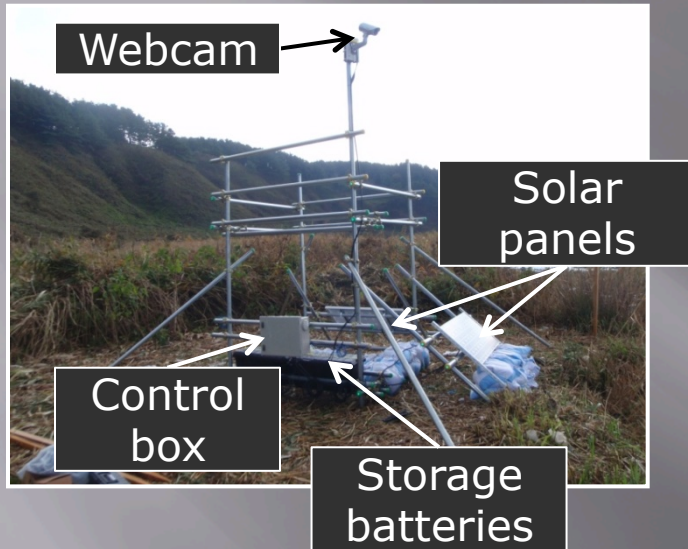
Photographs

Operating time → every two hours from 7:00 to 15:00 (i.e., five operations every day)

Taking photographs → five photographs every operating time

Daily number of photographs → 25 photographs (i.e., 5 (operations) × 5 (photos) = 25)

Picture of electric device



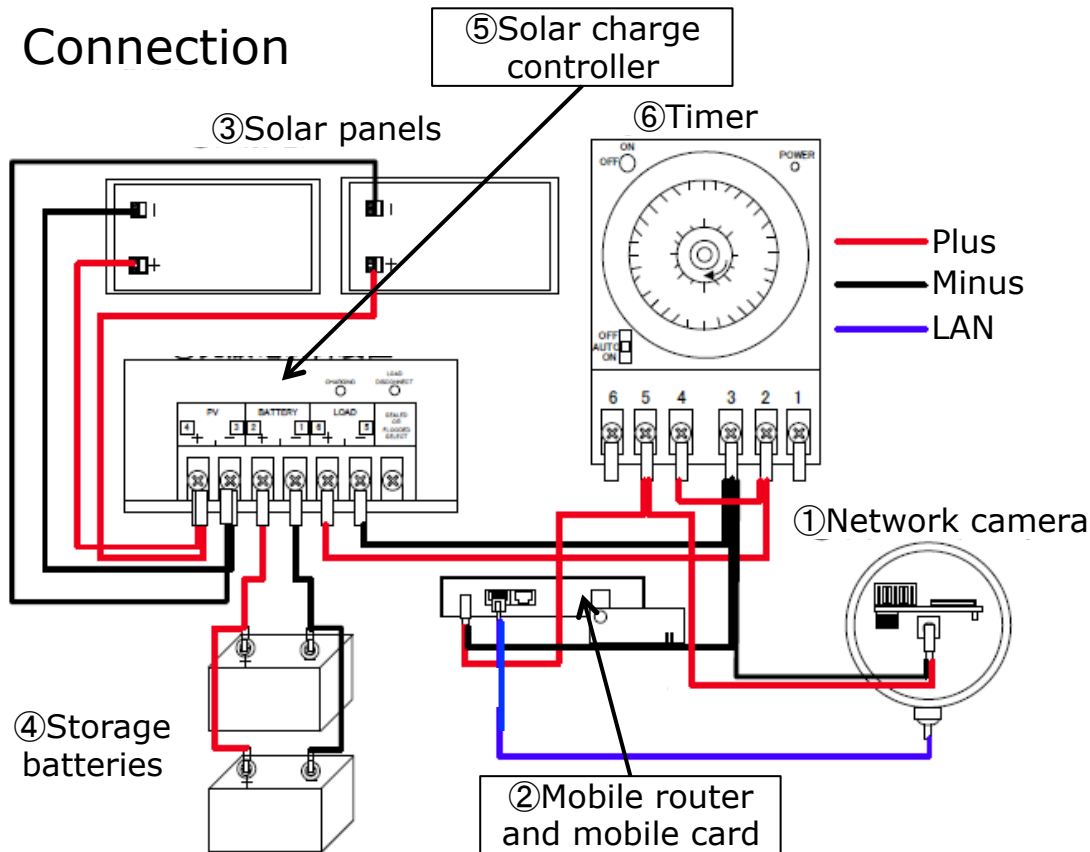
System specification

Product	Number	Type and maker
Webcam	1	IP7361, Vivotek
Mobile router	1	DCR-G54/U, I-O Data Device
Solar panel	2	DCO80-12S, Denryo
Storage battery	2	DC-31, ACDerco
Solar charge controller	1	SS-20L, Denryo
Timer	1	H2F-31, Omron
Mobile card	1	L-05A, LG Electronics
Control box	1	PL16-54K, Nitto Kogyo Corporation

cost (electric devices)≈\$4,000/system

Connection diagram

Connection



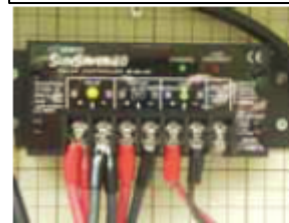
① Network camera



③ Solar panels



⑤ Solar charge controller



② Mobile router and mobile card



④ Storage batteries



⑥ Timer

