Activities for the Establishment of Virtual Laboratory in JMA

This document describes the activities in the Japan Meteorological Agency (JMA) for the preparation of the Virtual Resource Library (VRL) and the Asia Pacific Satellite Application Training Seminar (APSATS) 2002 workshop.

The web page for VRL will be established by the end of 2001 after the preparation to increase the network capacity for the Internet.

A CD-ROM publication, "Analysis and Use of Meteorological Satellite Images (Meteorological Satellite Center, March 2000)" will be issued before the APSATS 2002 workshop. JMA would be pleased if it could be used as an additional teaching material for VRL.

No action is required on this subject.

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1. Introduction

The first session of the CGMS Virtual Laboratory Focus Group held at the EUMETSAT Headquarters in Darmstadt, Germany, from 16 to 18 May 2001 drafted a proposed structure and developed the goals and the implementation plan for the CGMS Virtual Laboratory Focus Group in response to the action 28.14 at the previous CGMS meeting.

The strategic goals of the Virtual Laboratory are to provide high quality and up-to-date training resources on current and future meteorological and other environmental satellite systems, data, products and applications; and to enable the "centers of excellence" to facilitate and foster research and the development of socio-economic applications at the local level by the NMHS through the provision of effective training and links to relevant science groups.

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2. Preparation for the Virtual Resource Library

On 19 July 2001, in response to the action item at the first session, JMA informed BoM that it will be able to provide 11 raw resources including the Satellite Animation and Interactive Diagnosis (SATAID) and 5 training resources, which are available for the Virtual Resource Library (VRL) in JMA, shown in the attached tables. SATAID is a set of software and teaching materials for the lectures and practice of neph-analysis and tropical cyclone analysis, and has been improved along with the training course in satellite meteorology held at the Meteorological Satellite Center (MSC). It provides the various functions and materials for satellite image analyses, e.g. displaying and animating satellite images, overlaying the surface and upper-air observation data and the products of Numerical Weather Prediction (NWP), displaying and speaking out the explanations on case studies.

JMA is considering to identify which data and products could be linked into the core VRL because some CD-ROM based publications may preferably be sent by airmail considering their size more than 500MB.

The web page for VRL will be opened to make the resources of JMA available within the VL users including the "centers of excellence" and the satellite operators via Internet but user ID and password will be issued for the users in order to access to the web page. A prototype of the web page is being evaluated in MSC and the web page for VRL will be established by the end of 2001 after the preparation to increase the network

capacity for the Internet. Its top page is shown in Figure 1.

3. SATAID Improvement Plan for VL

JMA will prepare additional software in order to convert the satellite data from RAMSDIS format to SATAID format since the RAMSDIS format is to be the common format in VL as shown in the working paper, JPN-WP-07 at CGMS-XXIX.

4. Plans for APSATS 2002

The APSATS 2002 workshop will be held at the BMTC in Melbourne, Australia in 2002, co-sponsored by WMO, JMA and BoM. JMA will dispatch staff members of JMA as the lecturers and provide the materials and tools for VRL in the APSATS 2002 workshop. The materials used at the workshop will be stored in CD-ROM and distributed to the participants. They will also be available in the web page for VRL after the workshop.
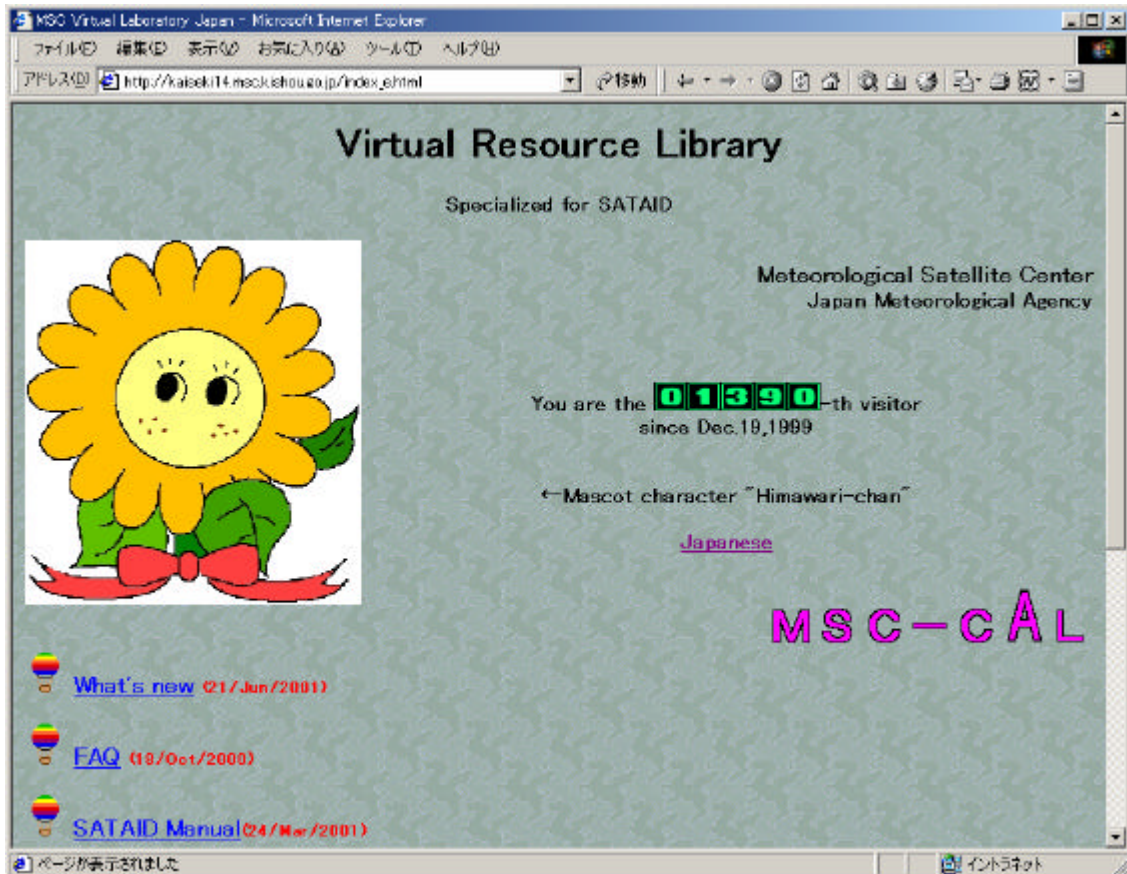
A publication, "Analysis and Use of Meteorological Satellite Images (Meteorological Satellite Center, March 2000)" will be issued soon as a CD-ROM publication. It is an English translation of a Japanese publication, which is based on the effort of the similar guidebook of nephanalysis for GMS imagery issued by MSC but refreshed to provide new imagery and the latest knowledge, in particular, the use of water vapor and IR split channel and to be used as a reference book for satellite image analysis. The initial issue of the publication will be prepared before the APSATS 2002 workshop. JMA would be pleased if it could be used as an additional teaching material for VRL.

5. Others

JMA will introduce the activities of the Virtual Laboratory, in particular the use of VRL, through the training events by JMA in order to support the activities of the "centers of excellence".

Fig. 1 Top page of the Virtual Resource Library prepared by JMA

(under testing)

Raw resources

Material in this category can be used by trainers to create new training sessions or update existing material
Most material will be in the form of images, movies, java applets or source code, electronic diagrams .. Etc

Title	Description of content	Contact email	Platform	Format	Size in megabytes	Region	Copyright	Prerequisite material	additional software requirements
GMS imagery	Near real time satellite imagery	calmstr@msc.kishou.go.jp		RAMSDIS	10/100	RA II,V	JMA		
SATAID(Gmslpw)	viewer program		MS Windows	Program	2		JMA	English	
SATAID(Gmslpd)	viewer program for tropical cyclone analysis		MS Windows	Program	3		JMA	English	
SATAIDmenu	data cut out and convert program for the viewer		MS Windows	Program	1		JMA	English	
SATAID(Bmplp)	viewer program of bitmap data		MS Windows	Program	1		JMA	English	
SATAID manual	SATAID viewer program operation manual		MS Windows	html	4		JMA	English	
ATCMENU	displaying lists for SATAID case explanation files		MS Windows	Program	1		JMA	English	
Extra use of satellite imagery	Images of volcanic ash cloud, yellow sand, forest fire		MS Windows	SATAID data	84	RA II,V	JMA	English	SATAID
Clear Air Turbulence (Aug.15,1998)	Images and related information when clear air turbulences were reported from airplanes		MS Windows	gif,jpg,bmp,SATAID data	37	RA II	JMA	English	SATAID
Annual Report of RSMC Tokyo - Typhoon Center	Satellite images and best tracks for typhoons in a year		MS Windows	CD(pdf,htm,txt,SATAID,Word,Excel,ppt)	503(for 2000')	RA II	JMA	English	Acrobat reader
Monthly Report of MSC	Image data, Satellite observation data, viewers		MS Windows	CD	578(for May,2001)	RA II,V	JMA	English	

Teaching resources

Resources in this category are able to be used as standalone by students or by trainers to illustrate sections of presentations

Material may be in the form of web pages, powerpoints, toolbook …. The material is more than just the images but has some added value

title	description of content	contact email	platform	format	size in megabytes	shows examples from which area of the globe	copyright	prerequisite material	estimated delivery time hrs:min			additional software requirements
cloudT\Exercise	Exercise for cloud type identification	calmstr@msc.kishou.go.jp	MS Windows	gif,jpg,bmp, SATAID data	113	RA II	JMA			English		SATAID
Typhoon\Center\Exercise	Exercise for tropical cyclone center analysis		MS Windows	gif,jpg,bmp, SATAID data	21	RA II	JMA			English		SATAID
Typhoon\Intensity	Exercise for tropical cyclone intensity analysis		MS Windows	gif,jpg,bmp, SATAID data	19	RA II	JMA			English		SATAID
Neph-analysis case study (980804e.atc)	Heavy rain in NIIGATA prefecture: (Aug.3,1998)		MS Windows	gif,jpg,bmp, SATAID data	50	RA II	JMA			English		SATAID
Neph-analysis case study (ecase3.atc)	A small scale Low which generates to the south of the Japanese Islands		MS Windows	gif,jpg,bmp, SATAID data	12	RA II	JMA			English		SATAID