

# Cyclotron 2004 Conference

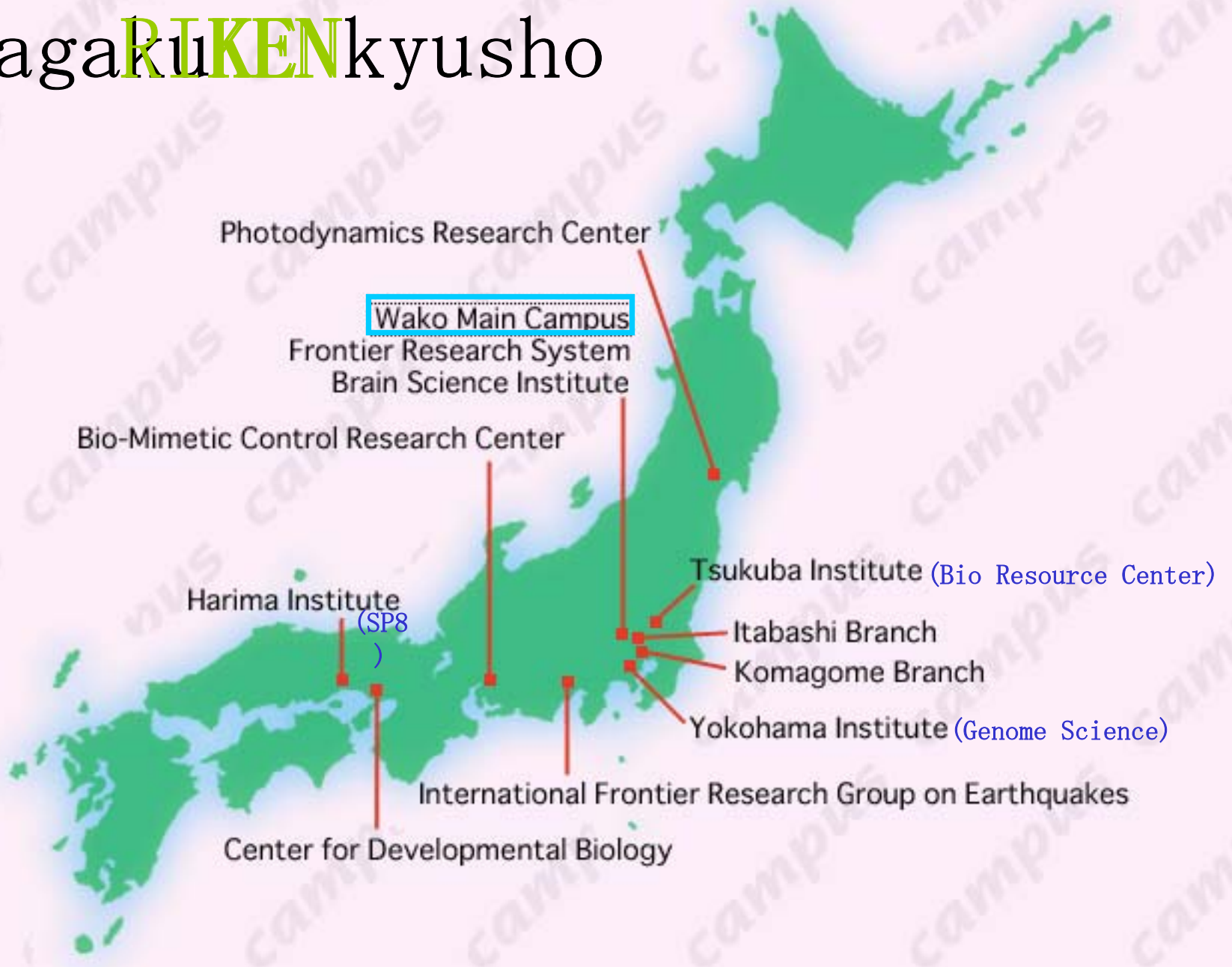
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JACoW 2002 Team Meeting (Nov.4-7, 2002)

# RIkagaRIKENkyusho





# RIKEN Aerial Photo

Accelerator Complex

Occupied by  
USA

Local School

Owned by the  
Ministry of Finance





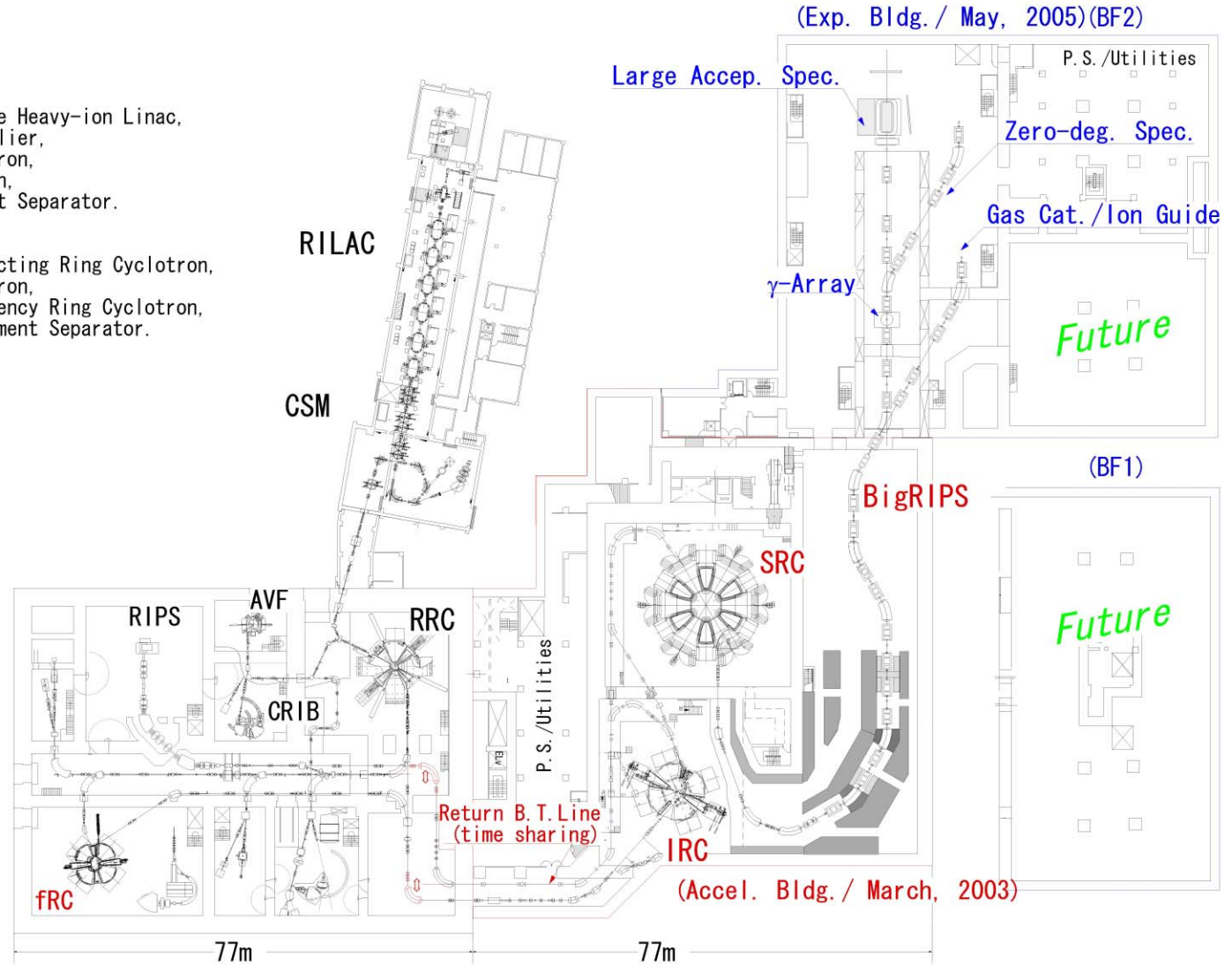
# Layout of the RI Beam Factory (RIBF)

## Existing Facility:

- RILAC: Frequency-variable Heavy-ion Linac,
- CSM: Charge State Multiplier,
- RRC: K540MeV Ring Cyclotron,
- AVF: K70MeV AVF Cyclotron,
- RIPS: Projectile Fragment Separator.

## RIBF Phase 1:

- SRC: K2500MeV Superconducting Ring Cyclotron,
- IRC: K980MeV Ring Cyclotron,
- fRC: K520MeV Fixed-frequency Ring Cyclotron,
- BigRIPS: Projectile Fragment Separator.



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18-22 October, 2004  
[Tokyo International Exchange Center, Tokyo, JAPAN](#)

Cyclotron Information  
Submission Form

**First Announcement**

**General Information:**

- ◆ Introduction
- ◆ Topics
- ◆ Conference Venue
- ◆ Key Dates
- ◆ [Schedule \(Tentative\)](#)
- ◆ Hotel Accommodation
- ◆ Transportation
- ◆ Visas
- ◆ Conference Reception
- ◆ Practical Information
- ◆ Sponsors & Exhibitors
- ◆ [Organizing Committees](#)

**Author's Information:**

- ◆ Scientific Programme
- ◆ Abstract Submission
- ◆ Paper Submission
- ◆ Registration
- ◆ Search the Abstracts
- ◆ Paper Format
- ◆ Poster Format
- ◆ Paper Status
- ◆ List of Participants

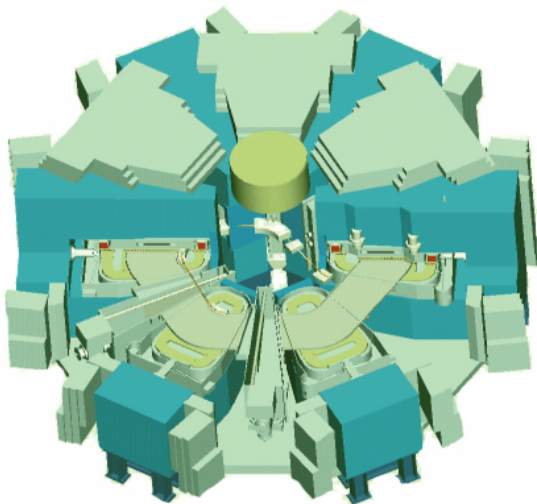
If you have any questions please contact us at [goto@postman.riken.go.jp](mailto:goto@postman.riken.go.jp)

We thank MSU to allow us to use

# Cyclotrons 2004

*International Conference on  
Cyclotrons and Their Applications*

18-22 October, 2004  
Tokyo International Exchange Center, Tokyo, JAPAN

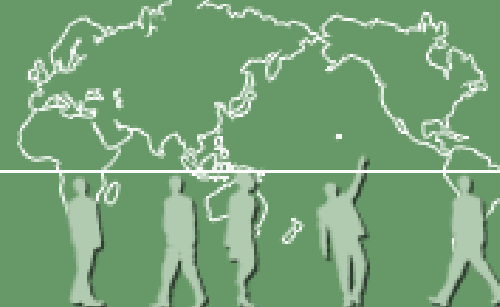


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(AIEJ)



[Plaza HEISEI Facility Guide](#) →

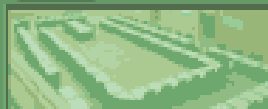
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Plaza Heisei is amply equipped with facilities to promote international exchange in the 21 century.



[Plaza HEISEI Meeting Facilities](#) →

プラザ平成・会議施設利用案内



[Residence Hall Facility Guide](#) →

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Befitting a center for intellectual international exchange in the 21 century, Tokyo International Exchange Center provides a high quality living space

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[! Conference & Symposium 会議・シンポジウム情報](#) [Click▶](#)

### Topics

[▶ AIST Symposium 2002 Bioinformatics in the Post-Genomic Era \(November 8, 2002\)](#)

[! Access Map ▶ 交通](#)

[! Links ▶ リンク集](#)

[! About ▶ 東京国際交流館 概要](#)

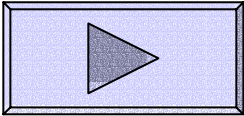


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Association of International  
Education, Japan (AIEJ) →

# Database, XML & Web Server Tests

- ▶ OOBMS Test (Objectivity-DB, 1999)
  - Because our experiment group was using it
  - C++ interface (now also Java)
  - Limited user base
  - Now CORBA has RDBMS connectivity → No strong reason for OOBMS
- ▶ RDBMS Test (XML)
  - Oracle 8i & MySQL(3.23.33) for Miracle Linux
  - JDBC
  - XDK tools for Java for Oracle
- ▶ Web Server Test
  - JSP(Unicode problems for Japanese) with Apache+Tomcat (constantly changing)
  - JSP with Resin (needs only Java)
  - Porting Cyc2001 ASP & MS access package (bugs....)
  - Porting EPAC 2002 ASP & Oracle package (on-going)



## DB Access Time Comparison

Comparison Among 3 Different Configurations  
(Average for 10 Measurements, P3-933MHz)

	Search Time(ms)	DOM Transformation (ms)	File output (ms)	Total (ms)	Average Access Time (rows/s)
Oracle XDK	49	2368.3	261.5	2678.8	3733.01
Oracle JDBC	154.2	3063.8	484.3	3702.3	2701.2
MySQL JDBC	19	5339.6	467.7	5826.3	1716.36

Tables (10000 rows) used in the test

Table Name	Field	Data Type	Size	Field Size in Byte	Comments
WorkManageList	<b>WorkNumber</b>	<b>VARCHAR(20)</b>	Variable	10~15	External Key
	RegistDate	DATE	Fixed	7	3 byte for Mysql
	StartDate	DATE	Fixed	7	3 byte for Mysql
	EndDate	DATE	Fixed	7	3 byte for Mysql
	Title	VARCHAR(80)	Variable	11~15	
	Contents	VARCHAR(1024)	Variable	11~44	
	Rate	INTEGER	Fixed	4	
WorkComments	DateNumber	INTEGER	Fixed	4	
	<b>WorkNumber</b>	<b>VARCHAR(20)</b>	Variable	10~15	Primary Key
	EntryDate	DATE	Fixed	7	3 byte for Mysql
	Comments	VARCHAR(1024)	Variable	10~122	
	WorkingHours	INTEGER	Fixed	4	





# Internationalization Issues

- ▶ Java uses Unicode to make language change easier
  - *PropertyResourceBundle* class to Switch the Languages
    - English : `<class>.properties`
    - Japanese : `<class>_ja_JP.properties`
  - Unicode Escapes to Send Japanese via CORBA
    - Example: `“abcあいう”` → `“abc\u3042\u3044\u3046”`
  - *native2ascii* Command to Modify “properties” File
  - From J2SE1.4, changed from UCS-2 to UTF-16
  - However, different OS, different version of JDK use different fonts/property format (at least for Japanese)
- ▶ JDBC or XDK absorb Japanese encoding problem (in Oracle8i)
  - *Three Major Character Encodings for Japanese*
    - For e-mail: ISO-2022-JP(JIS)
    - For Windows PC: Shift-JIS (SJIS~MS932)
    - For UNIX WS: Extended Unix Code (EUC-JP)
  - For MySQL, `String url = "jdbc:mysql://"+ server + "/" + db + "?useUnicode=true&characterEncoding=EUC_JP";`
  - UTF8/UTFE (8.0-9i) Unicode2.1(8.0.x –8.1.6), Unicode3.0 (8.1.7-9iR2)
  - AL32UTF8 (9i~)
  - AL16UTF16 (9i~ NCHAR only)

# Conclusions (or my wish)

## ▶ Need A Minimum Common Frame Work

- What most conferences are required to do is almost the same
- URL, mail address, etc. should be stored in separate property files to be more
- Why does each conference have to recreate the similar system?

## ▶ Need A Lower-Cost Version

- Free RDBMS (PostgreSQL, MySQL, etc.) instead of expensive Oracle Enterprise
- Free Web Server (Apache, Resin, etc.) instead of MS-IIS
- Web scripts (JSP, PHP, etc.) that can run in a free web server instead of ASP

## ▶ XML Has To Be Designed Properly to Be Useful

- XML requiring XSLT seems to me complete non-sense
- Oracle-Produced XML files are not always best for you

## ▶ JACoW Standard Package with a simple installer is preferable