



Leibniz Institut für Pflanzen-genetik
und Kulturpflanzen-forschung (IPK)
Gatersleben, Germany
www.ipk-gatersleben.de

Industry:

Education & Research

Oracle Products & Services:

Oracle Database Enterprise
Edition
Oracle Warehouse Builder
Oracle Fusion Middleware
Oracle Application Server
Oracle SOA Suite
Oracle Portal
Oracle Discoverer
Oracle Business Intelligence

Oracle Partner:



B.I.M.-Consulting GmbH
www.bim-consulting.de

“With the use of our Oracle-based Plant Bioinformatics Portal, we have quickly managed to make the results of our bioinformatic research available transparently worldwide.” – Uwe Scholz, Workgroup Manager, IPK Gatersleben

IPK Gatersleben Enables Transfer of Knowledge with Worldwide Access to its Plant Bioinformatics Portal

The Leibniz Institute of Plant Genetics and Crop Plant Research (IPK) in Gatersleben is a nationally and regionally funded non-university research institute and a member of the Leibniz Community, an amalgamation of 83 research institutes in Germany. IPK Gatersleben is one of the leading international centers for plant research, in which problems of modern biology are studied primarily using crop plants. Foundation- and application-based interdisciplinary research focuses on devising new information and technologies for the comprehensive use of plant genetics resources for optimized material production and more environmentally sound agricultural methods.

Challenges

- Integrate the data and applications distributed internationally and locally in heterogeneous systems
- Develop and integrate analysis applications that work on the basis of the integrated data
- Create a “Plant Bioinformatics Portal” for different bioinformatics issues relating to plants and provide central access to the data, analysis, and results

Solutions

- Worked with B.I.M.-Consulting to implement Oracle Database Enterprise Edition as the basis for the plant data warehouse to achieve consistency in the system architecture’s technology
- Prepared, revised, and loaded information from individual data sources into the new system
- Created and integrated various Web-based applications in a service-oriented architecture (SOA)
- Protected sensitive, non-public data through LDAP integration (authentication) and the use of a virtual private database (authorization at data-record level)
- Achieved approximately 1,000 online accesses per month from more than 40 countries
- Developed a feedback system for continual need-based development of the portal
- Integrated the plant bioinformatics portal into the institute’s comprehensive content portal
- Used data warehouse technology to link the proprietary operative systems with external data sources to clarify specific questions relating to plant genetics