TITLE: Database Engineer		CHD-052
REPORTS TO LINE MANAGER: Head of CODAC & IT Division Department for CODAC&IT, H&CD and Diagnostics		
DIRECT EMPLOYMENT: NOT REQUIRED		**GRADE RANGE:** P3 – P4
Date Written: June 2008	**Date Revised:**	**Date Revised:**

Purpose:
The CODAC tasks of configuration data management is a challenging one. With more than one hundred Plant Systems delivering more than one million control and data acquisition channels, proper definition and implementation of the ITER Plant configuration database becomes a crucial point. The engineer will be responsible for the definition of database schema, its evolution path, database web interfaces to end users and database management tools. The engineer will also work closely with other ITER database specialists in order to develop full-featured interfaces with other project databases in accordance with the CODAC role in the project. Furthermore, the engineer will supervise and assist ITER Domestic Agencies in activities related to remote CODAC database filling and exploitation.

Major Duties/Responsibilities:

- Contributes to establishing CODAC software interface standards;
- Contributes to the CODAC engineering design in close collaboration with the CODAC team;
- Closely works with Plant System Responsible Officers to understand their needs in CODAC data management and to promote CODAC philosophy to Plant System design;
- Develops efficient procedures and algorithms for domain-specific data consistency checking;
- Is responsible for providing end user interface to the database;
- Is responsible for developing web services for programmatic database access;
- Communicates with ITER IT team to provide high availability solutions for CODAC databases;
- Maintains a strong commitment to the implementation and perpetuation of the ITER safety program, values and ethics.

Qualifications and Experience:

- **Education**: Master's Degree or equivalent University Degree in Science or Engineering.
- **Experience**:
    - At least 5 years of practical experience in a research or industrial environment with a similar scope of work;
    - Understanding of a scientific (physics) experimental environment is a valuable asset;
    - Solid working experience with at least one flagship relational database product (Oracle, DB2, MS SQL Server or MySQL);

    - Substantial knowledge of Web technologies and their application to databases;
    - Substantial knowledge of database performance optimization principles shall be demonstrated;
    - Understanding of database administration principles;
    - Skills in programming in either Microsoft NET environment or J2EE would be an advantage;
    - Ability to work in an international environment should be demonstrated;
    - Team- and project-management experience would be an asset.
- **Language requirements**: Good working knowledge of spoken and written English is essential.

Work Direction and Interfaces:

Reports to the Division Head (DH) for CODAC & IT.

Authority/Approval Levels:

Has authority and approval levels defined by the DH for his/her scope of work.

Measures of Effectiveness:

- Successfully designs and implements the CODAC configuration database;
- Successfully defines and supports long-term evolution of the database;
- Successfully defines and implements domain-specific consistency data checks;
- Successfully builds robust interfaces with project-wide databases;
- Successfully establishes flexible and convenient user access to the database;
- Successfully establishes effective procedures with the ITER IT team to support high availability of the developed software solution;
- Successfully supports the CODAC & IT needs of the project.