

## D&R Enterprise IP Management Platform IPMS™

### The challenge and D&R solution

IP based design is an approach that SoC design teams, fabless IC vendors and Electronic System designers must use due to the high levels of integration in today's chip designs. IP used in today's designs may have been developed internally or obtained from multiple external sources worldwide. Design teams are typically distributed worldwide, making the job of administering access to external and internal IP a major challenge for SoC and electronic product managers.

Design & Reuse ("D&R") has recognized these challenges and has responded with a solution that keeps pace with the multiple facets and ever-changing requirements of IP management. The D&R Enterprise IP Management solution (IPMS™) addresses the management of internal and external IP, from IP design to IP delivery and integration. It is a Java-based modular platform supporting an extensible and configurable set of management features that covers all facets of IP management, including publishing, client delivery, reuse for Internally developed IP, and multiple aspects of managing Externally Sourced IP such as usage tracking, revision control, contracting and financing.

## Innovation Badly Needed

### Product XML cataloguing

- Automated creation of XML web product catalog
- Flexible XML formatting with extensible set of leaf types
- Life cycle support
- Hierarchical description for IPs embedded in products
- Massive data Import/export

One of the most powerful features of the platform is the ability to generate flexible, evolving [product catalogs](#) that can easily be browsed by authorized users. The catalogs are based on a library of XML formats assigned to a catalog or categories within a catalog. A large variety of format leaf types (attributes, images, URL, bridges to IP files or related management panels) as well as an extensible unit library allows to cover an unlimited set of application domains. Easy mapping to new formats guarantees a life time support.

[Hierarchical view](#) is supported through product catalogs and embedded IPs, as well as related IPs and add-ons.

Alerts for product managers can be triggered whenever an embedded IP bug is declared.

Import and export features as well as massive data import are supported.

### IP centric Management panel

- IP centric management panel
- Flexible XML formatting Including bridging in synch with existing DBs
- Support Excel type computation

IP centric XML views or dash boards are easily created following IP life cycle from design to delivery and business such as IP Bug panel, IP delivery content, IP contracting and financing.

Panel format creation invokes a rich set of types, especially for "bridging" types targeting data from another panel, listing or existing DBs with automated refresh [to stay in Sync](#).

In addition, the platform supports any Excel type computation between fields.

## Powerful Administration Features

- In Synch with corporate LDAP or any authentication system for user access
- Access management grant right for performing an action to group of users
- Mail engine customizes mail destination and content
- Tracking of any actions on the platform
- Broadcast to group of users

A comprehensive set of ADMIN features comes with the platform user

First user entry is "in Synch" with the intranet authentication system (LDAP, Active directory, etc) of the company. Next a sophisticated access management system grants rights for all platform actions to users and a broad variety of user groups easily defined by the Admin. Tracking of any action on the platform is recorded in the platform.

Alerts or notifications to users or user group about any action on the platform or user request (Help Desk) can be configured by the Admin in a mail engine. Mail broadcast to users or group of users are fully integrated and community forum created through one single click.



## Internal IP Management

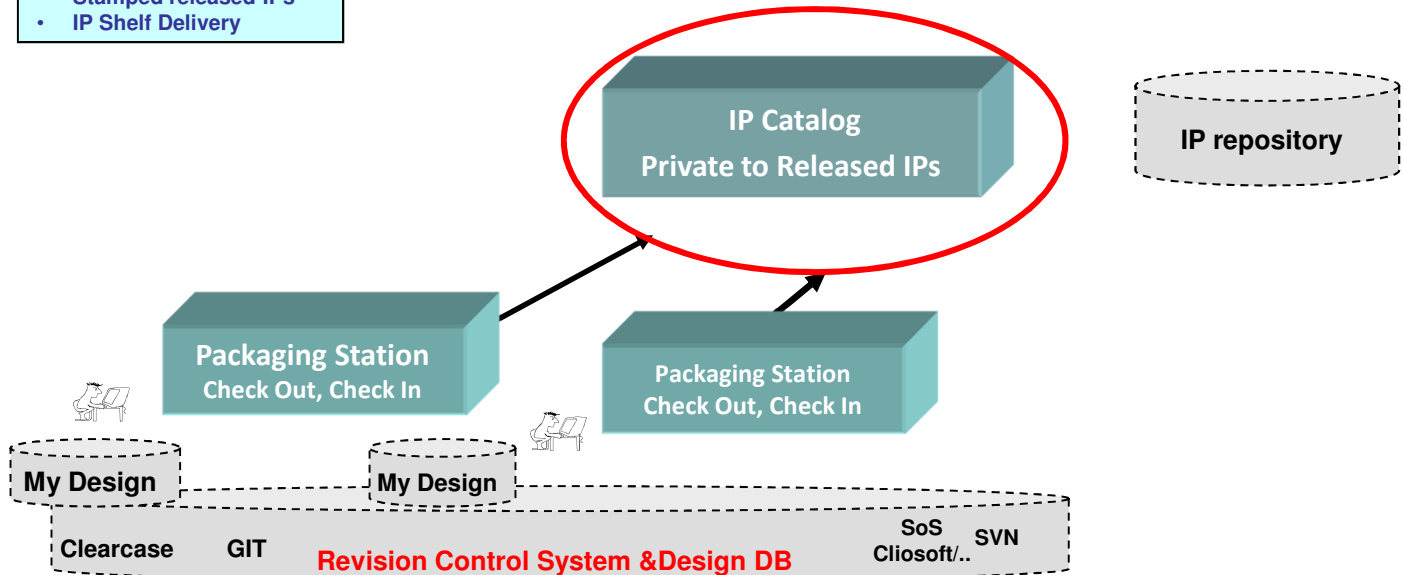
- IPs under development publishing
- Supports several revision control systems
- Revision control Front End and access to the design tools from the Platform
- Released IPs by filtering
- IP files in the revision control system
- Stamped released IPs
- IP Shelf Delivery

Internal IP management starts with the capabilities of declaring an IP under design in the catalog while the IP is still underdevelopment . A variety of representations will be available from “maturity panels” to any milestone description publishing .

Next the designer will be to access from the platform his design tools through pre stored scripts and his IP directory through its revision control system (ClearCase, Git, etc) Moreover the environment will support several revision control systems allowing the company to let division work in their environment revision

Released IP is defined **by filtering** the IP directory, **freezing** the IP delivery files and **stamping** the IP files with location path in the revision control system.

A released IP also called a *shelf delivery* as it is ready and identified to be used in a product or to be shipped.



## External and internal IP Management

- Tracing IP in products
- Synchronizing IP versions in projects
- IP contracting panel and compliance checker
- IP financing panel Alert on payment due
- Product royalties calculation

External IP management starts from a delivery step similar to internal IP. It means that a shelf release is identified under the responsibility of the IP provider. The platform host an (external ) IP repository put under revision control whereas the Internal IPs may stay under their native DB locations . Thus the next features may be common for internal and external IP

The main features supported are:

### •IP License Management

•**Tracing IP in project** through specific attributes mentioned above

•**Tracing and refreshing IPs in projects** .A special command *add IP* in project and **Synchronize** traces the IP added to a project and allows replacing an IP version by any other ( newer) version

•**Contracting panel** follow-up and **compliance checking** based on data in Sync with a Contract data base

•**Finance Panel including Royalties calculation reporting** on due dates ,sending alerts when payment due

