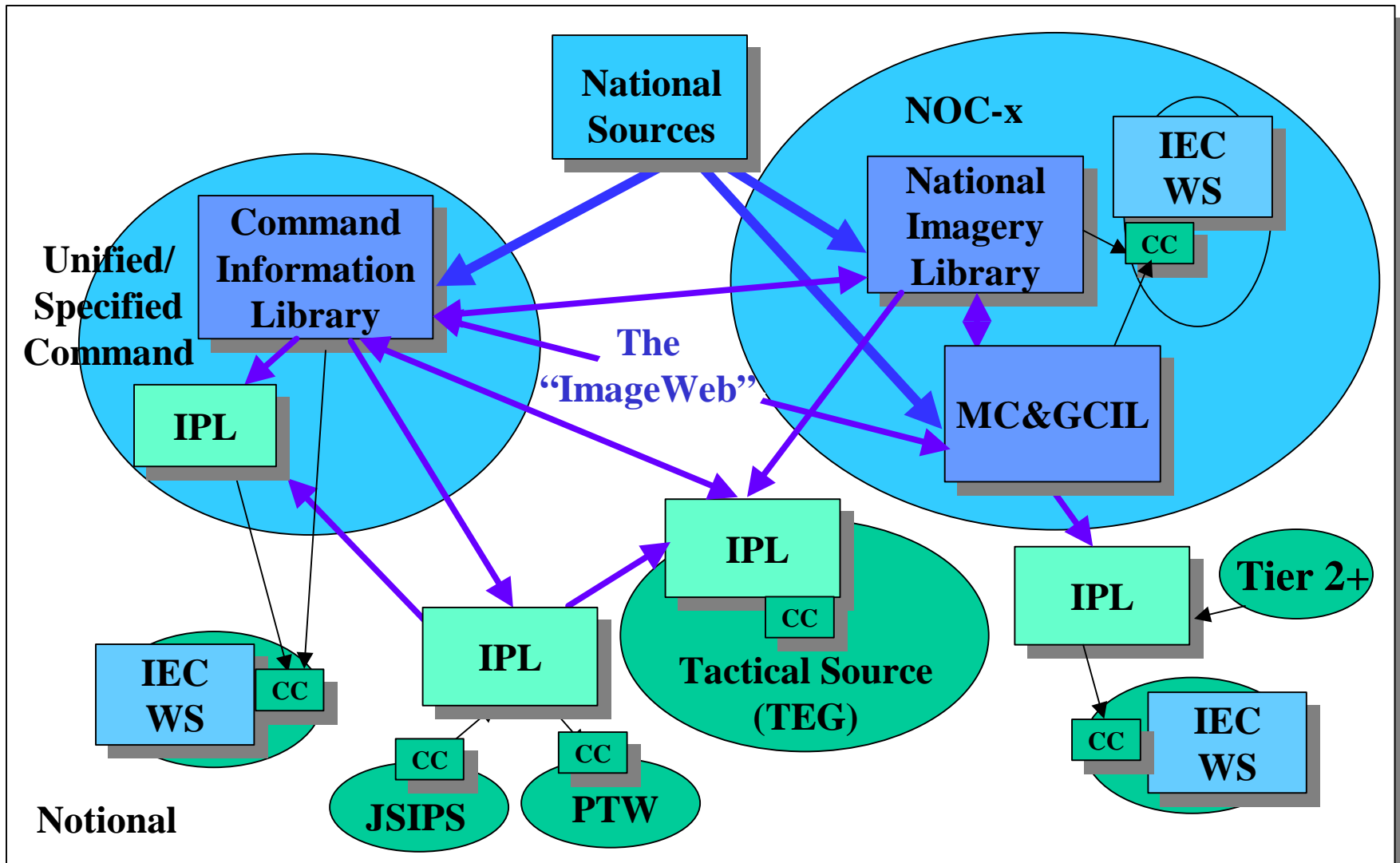


Image Product Library (IPL) Program Overview

**The NIMA Library Vision:
A Seamless, Distributed, Virtual Library
Accessible By Any Workstation With A Common Client**



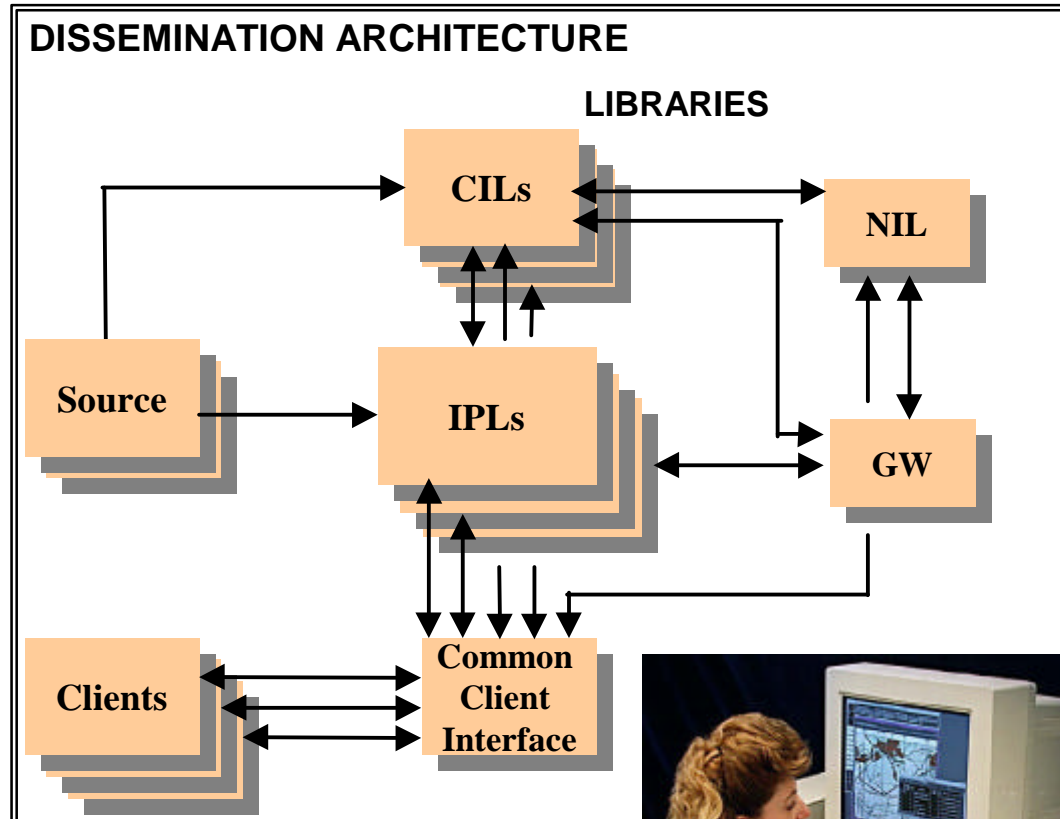
What is an IPL?

- The Image Product Library Program is an Imagery and Imagery Product Storage, Query, and Retrieval System:
 - Standards based
 - “Virtual” network of NIMA USIGS Archives/Libraries
 - Supports customers at Product, Command, and National levels
 - Accessed through a common user interface by the Information Access Common Client (post IPL 2.0)
 - Accessed through the Broadsword Client (HTTP interface) for the 2.0 baseline

What is an IPL (cont.)?

- One of five archive components of the USIGS Archive and Dissemination Element of the NIMA Libraries Concept of Operations
- Migration system to replace legacy USIGS imagery archive systems at DCGS and sites selected by organizational commanders
- Also provides deployable USIGS library capability
- Initial release is known as the IPL 2.0 baseline

Image Product Library



*Image Product Library Supports
Rapid Dissemination to
Warfighters*



Why Migrate to an IPL?

- NITF compliance (MIL-STD-2500A) Release 2.0
 - 5D is NITF level 3 (up to 2K by 2K)
 - IPL is NITF level 6 (up to Full frame)
 - 2500B, Release 2.1 compliance planned for post IPL 2.0 time frame
- IPL supports client profiles
 - Works through GIAS/UIP compliance (version 3.1)
 - Provides capability for standing queries
- IPL will provide seamless communication to libraries of all types and access to any user with NetScape and connectivity
- IPL is Y2K compliant

IPL 2.0 Features

- Non-proprietary Architecture
 - CORBA implementation (OMG IIOP 2.0 specification)
 - GIAS/UIP compliant to version 3.1
 - defines common IDL for IPL Client/Server IIOP
 - will migrate to 3.3 for Common Client communications post IPL 2.0 release
 - used for IPL Administrator Client communications
 - USIGS LDM compliant to version 1.0
 - Backward compatible to previous IPL version (IPA 1.0)
 - Goal of DII-COE compliance to Level 5
 - Spiral development effort

IPL Requirements

- Basic IPL Requirements are:
 - Import
 - Cataloging
 - Store
 - Query
 - Export

IPL 2.0 Architecture

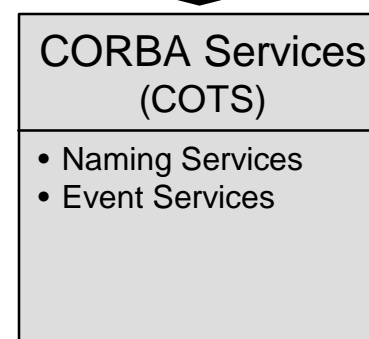
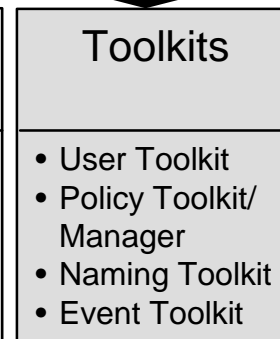
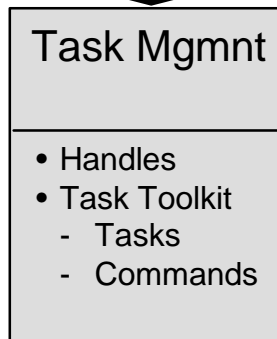
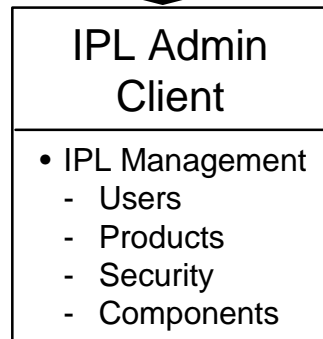
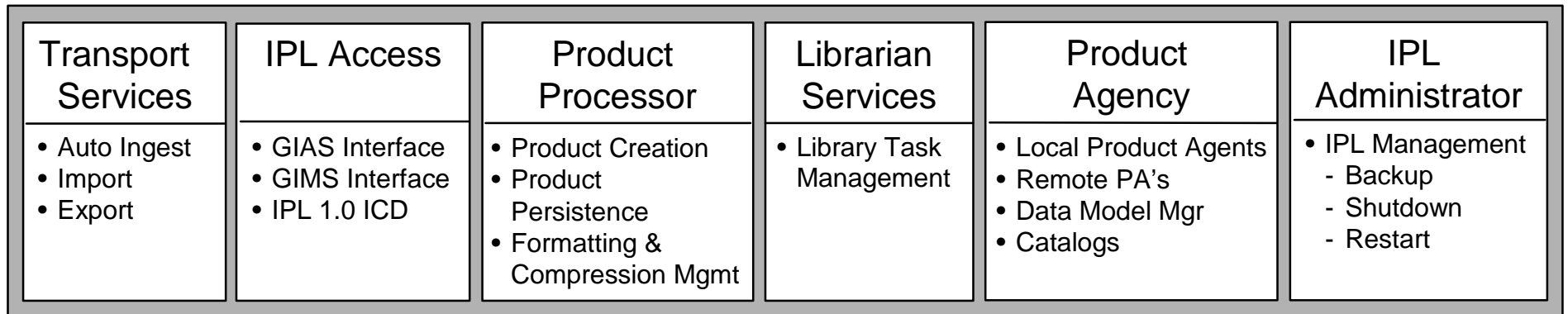
- Architecture based on Object Oriented Framework
 - Common Objects
 - Intermediaries and Base Classes
 - Tool Kits
 - Provide general utility capability
 - Facilities
 - Domain Managers within the design
 - Logical Groupings within the design
 - Major Elements of the architecture

IPL 2.0 Architecture (cont.)

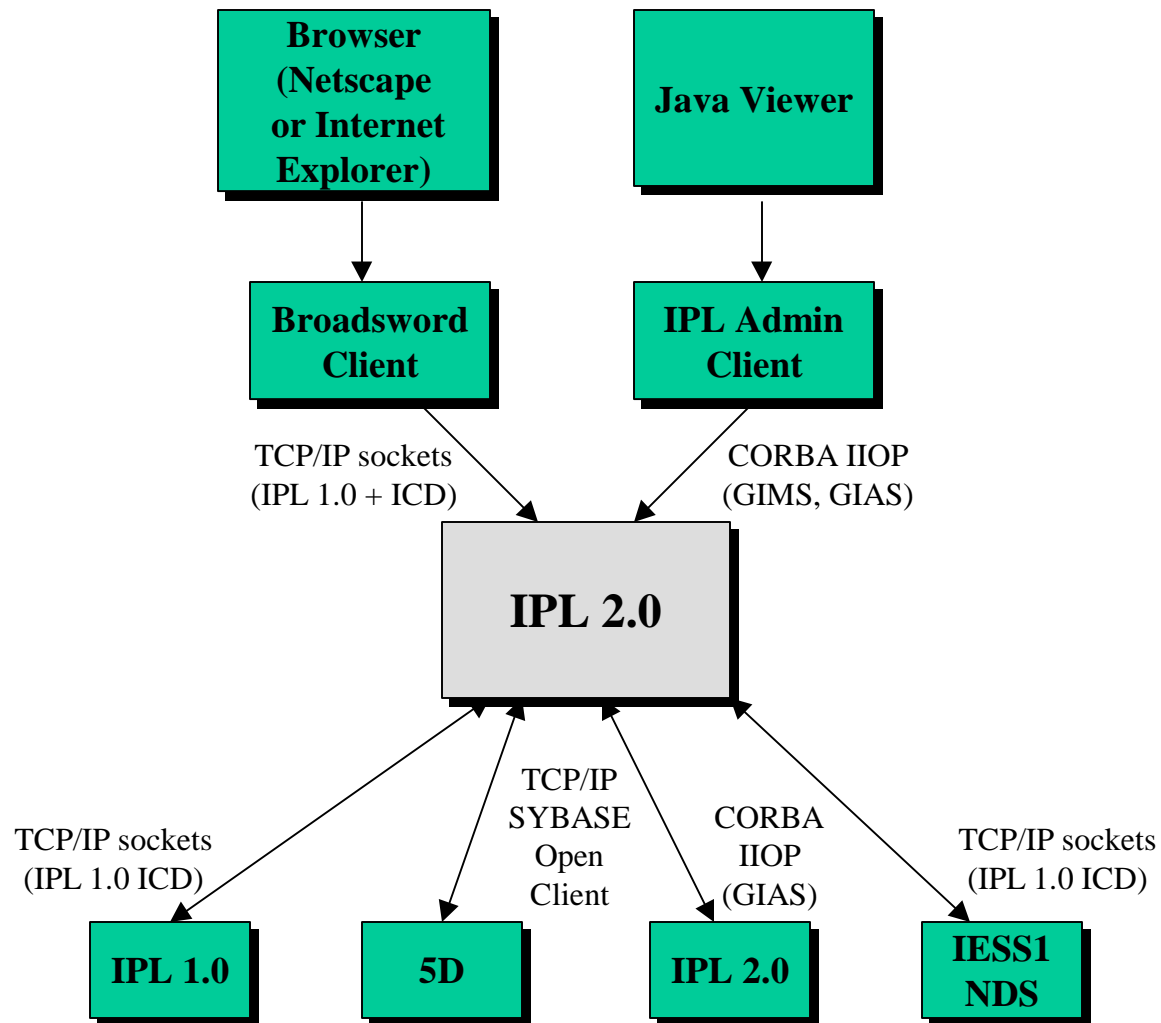
- Facilities

- IPL Access: GIAS/UIP, GIMS, IPL ICD (1.0, 1.0+)
- Library Services: Library Management
- Product Agency: Archival Interface
- IPL Administration: System Administration
- Product Processor: Format, Compression, Chipping, R-Set generation, metadata editing, & retrieval
- Transport Services: FTP, E-mail, & communication

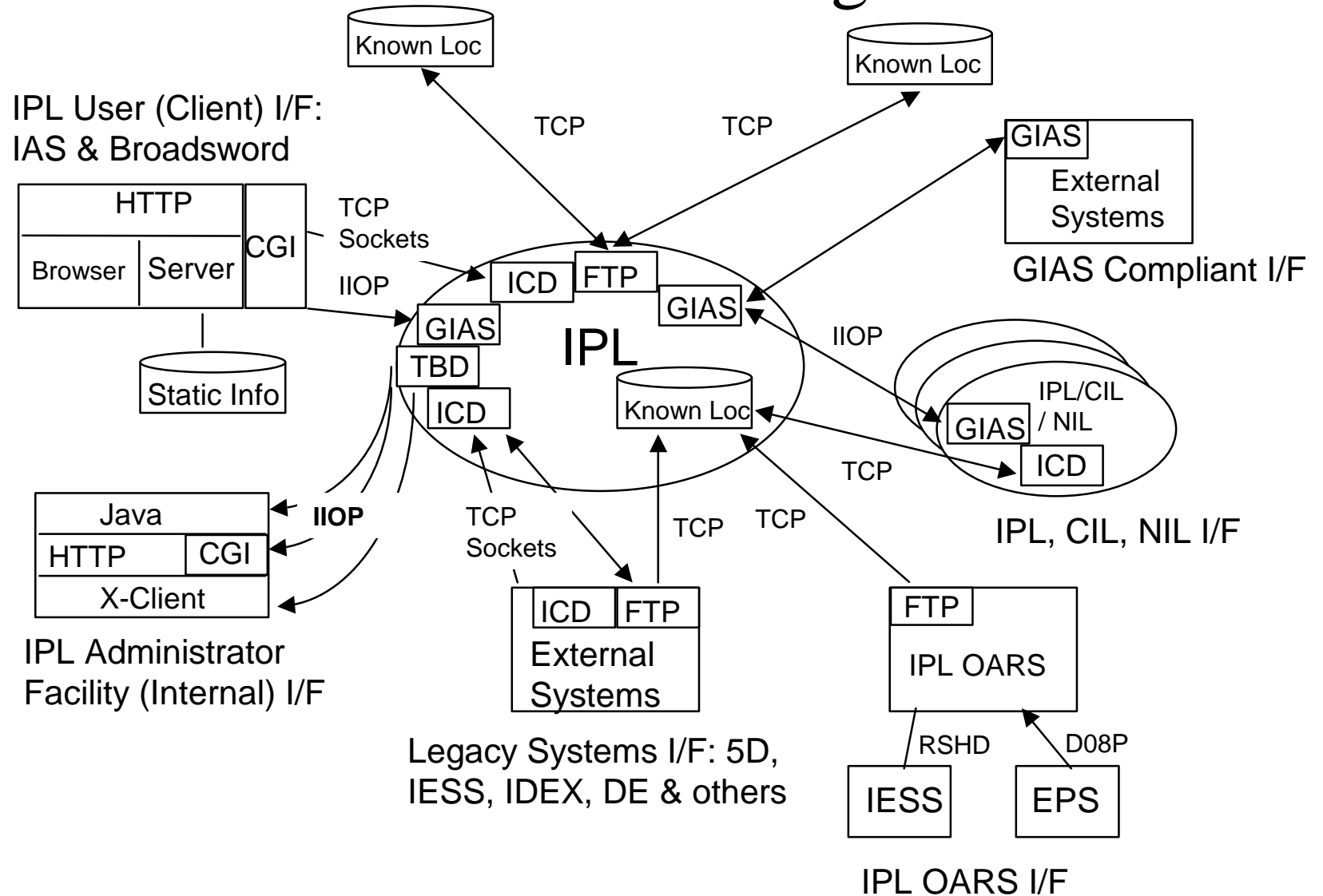
IPL 2.0 CORBA Framework



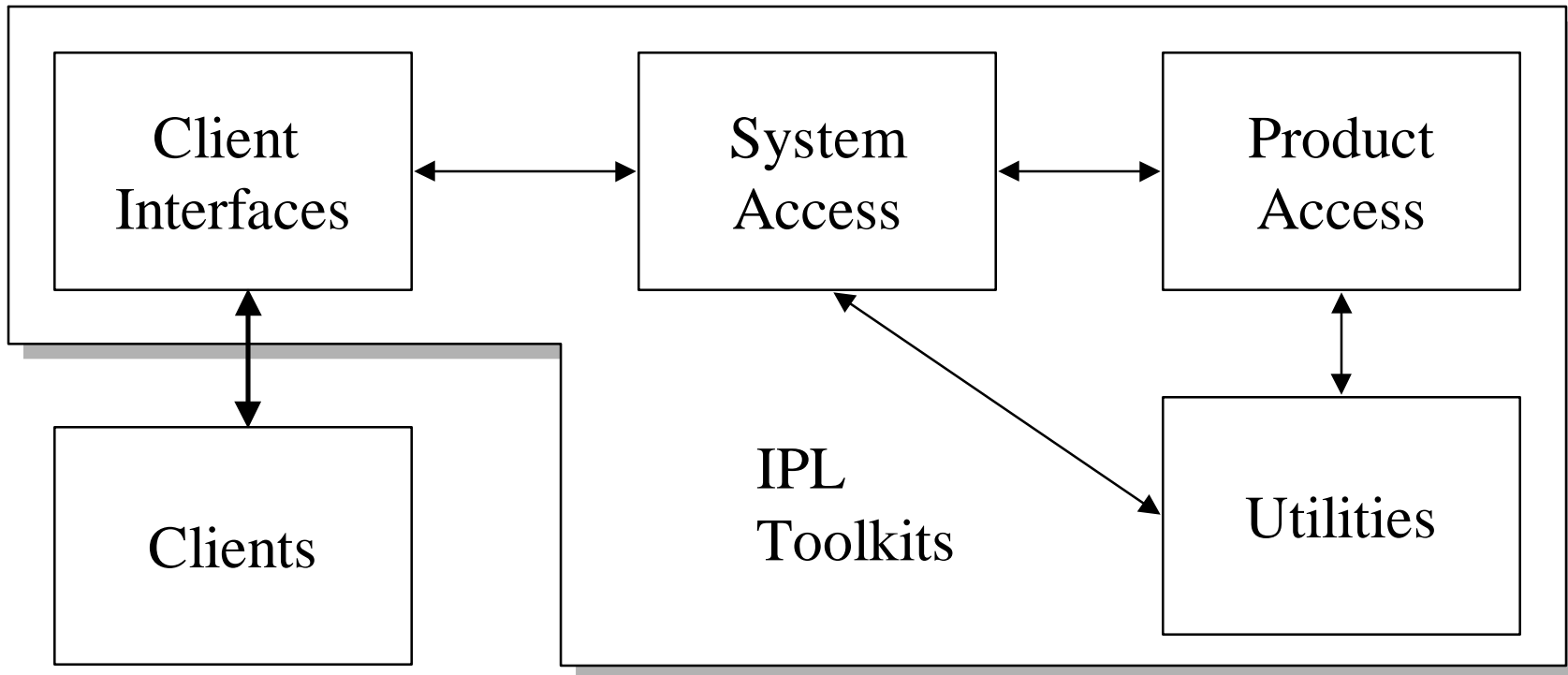
IPL 2.0 Interface Diagram



IPL 2.0 Interface Diagram



IPL 2.0 System Components



Clients

IPL 1.0 ICD
IPL 1.0 ICD+

Broadsword

GIAS
GIMS

**IPL Admin
Client**

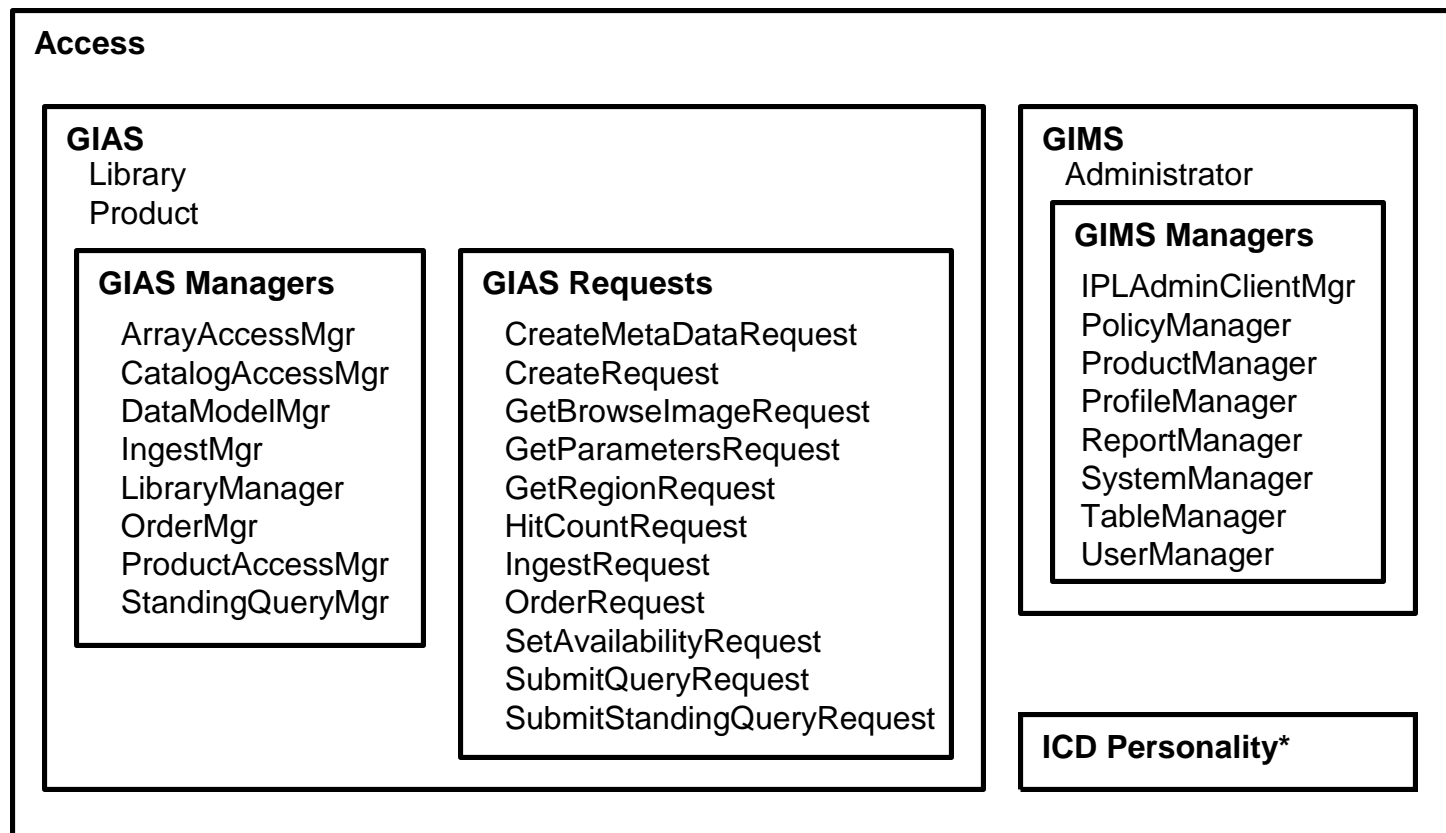
User Manager
System Manager
Product Manager
Policy Manager
Report Manager
Profile Manager
Session Management

GIAS

**GIAS Product
Agent**

**IAS Common
Client (post 2.0)**

Client Interfaces



*Not a CORBA Component

System Access

Librarian Services

Librarian Factory

Command Factory

Tasks

CheckAvailability
DeleteProfile
Export
GetProfiles
Import
MakeAvailable
Migrate
Modify
Purge
Query
StoreProfile
UpdateProfile

Commands

GetProduct	RegisterTM	StoreProduct
ComponentBackup	AddTransportRequest	MigrateProduct
ComponentRestart	GetTransportSourceDest	SubmitQuery
ComponentShutdown	SetEmailContents	SubmitBrowse
ComponentStartup	SetGBSHostName	CheckAvailability
CatalogBackup	SetTaco2HostName	UpdateProduct
MakeAvailable	SetEmailAddress	DeleteProfile
PurgeProduct	SetEmailSender	StoreBadProduct
StoreProfile	SetDestTransportMechList	SetEmailSender
GetProfiles	SetFileLocationList	SetEmailContents
ResolveProduct	Transport	
	SetSourceTransportFormatList	

Librarians

CreationLibrarian
DataModelLibrarian
ExportLibrarian
MigrationLibrarian
ModifyLibrarian
ProfileLibrarian
PurgeLibrarian
PurgeLibrarian
QueryLibrarian

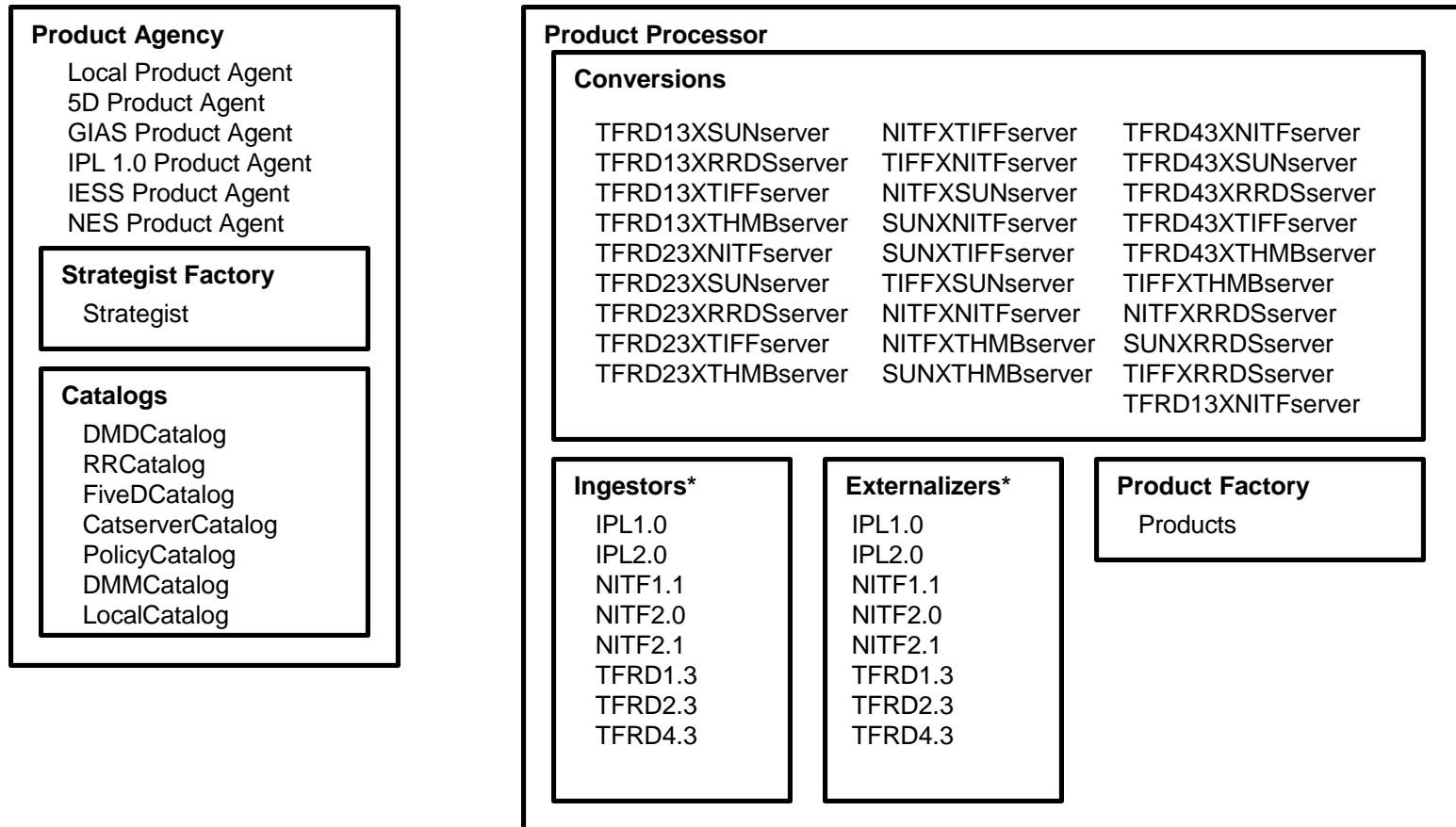
Handles

IPL_AvailabilityHandle
IPL_CreationHandle
IPL_ExportHandle
IPL_MigrateHandle
IPL_ModifyHandle
IPL_ProfileHandle
IPL_PurgeHandle
IPL_QueryHandle

IPL Admin

Administrator
System Manager

Product Access



*Not CORBA Components

Utilities

Reporter

DataTSDDataReporter
FacilityLogReporter
LogTSLogReporter
BCLogReporter
SecurityLogReporter

Recorders

DataTSDDataRecorder
FacilityLogRecorder
LogTSLogRecorder
BCLogRecorder
SecurityLogRecorder

Transport Services

Autoingest Managers

Transport Managers

Transport Source
Transport Destination

IPL Toolkits

Policy Manager
Configuration
Manager
Policy Set Template
Policy Set Instance
Policy Template
Policy Instance
Policy Element
Template
Policy Element
Instance
Policy Validator

Policy Toolkit
Policy
Policy Element
Policy Element Base
Policy Supplier

DAG Toolkit*
DAG Iterator
DAG Tool Factory
DAG Tool
DAG Record Iterator

User Toolkit

Session Factory
Session
Session Listener
Session Requestor

Event Toolkit

*Not CORBA Components

Broadword Client Overview

- Web-based (http protocol) interface
 - Provides query, ingest, and export capability
 - Client connects to Broadword Server
 - Broadword Server communicates with IPL 2.0
- Broadword uses sockets-based communications to IPL 2.0
 - Specified in IPL 2.0 ICD (1.0 +)
 - Enhanced version of IPL 1.0 ICD
 - Does not use GIAS (CORBA) interface specification

IPL Administrator Client Overview

- Web-based (IIOP protocol) administrator interface
 - Provides IPL management/configuration capability
 - Java applet communicates directly with IPL 2.0
- Programmatic interface defined in CORBA IDL
 - Geospatial and Imagery Access Services (GIAS)
 - Query, data model, and profile access
 - Geospatial and Imagery Management Services (GIMS)
 - Product, policy, system, and client management