The problem

- How do we manage and leverage the patent portfolio while
  - the portfolio
    - has increased tenfold over last 6 years,
    - is managed from multiple departments,
    - is made up of several technologies,
    - has several geographic points of origin,
    - involves increasing management participation & accountability?
- and generate intelligent & accessible information?
- and keep costs down?
The result

1. 400% productivity increase in patent process flow management.
2. Many tasks absorbed in-house w/o adding extra personnel.
3. Entire portfolio centralized within the corporation.
4. Real-time monitoring and management of costs.
5. Ability to rapidly respond to any corporate strategic or tactical moves.
6. Actively leveraging patents as a tool for competitive advantage.
7. Portfolio development and management are processes not events.
U.S. Issued Patents

LSI Logic patent portfolio management. © LSI Logic Corp. 1999-2003
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Patented technologies

Packaging

Microprocessor
Mixed Signal

Test
Design (EDA/CAD)

Memory

Manufacturing

Functionality
DSP
Broadband
Networking
Storage
Video
Wireless
IP Centers of Innovation

- Minneapolis, MN
- Rochester, MN
- Waltham, MA
- Gaithersburg, MD
- Wichita, KS
- Atlanta, GA
- Dallas, TX
- Austin, TX
- Fort Collins, CO
- Colo. Springs, CO
- Milpitas, CA
- Santa Clara, CA
- Gresham, OR
- Seattle, WA

CHINA
- Shanghai

JAPAN
- Tsukuba

EUROPE
- Design Centers

UK
- Bracknell
- Manchester

Centers of Innovation
Patent Management Team
Parties involved
Annual trends

Budgeted dollars per U.S. original patent application filed
(Numbers are normalized with respect to 1995)
Best practices

- IP management is a process – not an event.
- IP creation and portfolio management occur in parallel.
- Quantify as much as possible – measurability and accountability.
- Track activity throughout the process.
- Focus on process & automation.
- Delegate to professionals the tasks of
  - analysis,
  - interpretation,
  - judgment and
  - decision making.
Best practices

- Alignment of business with patent protection.
- Rating of invention disclosures, applications, and patents.
- Portfolio Classification.
- Guidelines for
  - Filing
  - Prosecution
  - Issue
  - Maintenance
  - Outside Counsel
- Real-time
  - Reporting capability.
  - Budget management.
- Competitive analysis.
- Knowledge sharing company-wide - webification.
Automated tasks

- Process flow management.
- Docket management.
- Corporate goals management.
- Invention rating.
- Law firm management.
- Budget management.
- Leveraging the internet.
- Communicating with team members.
- Citation Analysis
- Awards administration.
- U.S. maintenance fee payments.
- USPTO Deposit Account Management.
Patent Portfolio Management

- Prosecution
- Non-patent protection
- Licensing
- Litigation
Strategy

- Defensive
  - Freedom of design.
  - Portfolio building to protect our products.
  - Portfolio building as a deterrent.
  - The patent score-card.

- Offensive.
  - Exclude competitors.
  - License for money.
  - Cross-license.
Invention Rating

- Automatic assignment of team members.
- Rigorous internal review process
  - Attorney review and Liaison review.
  - Each case has its own ‘review committee’.
  - Rating determines comparative value of invention.
- Rating is at 3 levels –
  - Invention Disclosure
  - Patent Application
  - Issued Patent
- Different questions asked at each level.
Portfolio classification

- Entire portfolio is divided into technology categories
  - Storage
  - Video
- Each category is further divided into sub-categories
  - Storage - SCSI.
  - Storage - PCI.
  - Video - Decoding.
  - Video - Encoding.
- Portfolio is further identified by products or roadmaps
  - Set-Top Box tuner chip.
- Portfolio is further identified by Standards
  - MPEG.
Alignment with business and engineering

- Sources of innovation
  - Key inventors.
  - Key business units e.g. R&D
- Events of innovation
  - Product Developments
  - Roadmaps
  - Brainstorming
  - Harvesting
- Corporate goals.
Competitive Analysis

- Manage entire bundle of rights for competitive advantage
  - Patents
  - Copyrights
  - Technology licenses - granted or received
  - Patent Licenses - granted or received
  - Know-how licenses
- Each bundle of rights may be linked to several parties.
Each party may be -

- Cross-Licensee
- Customer
- Vendor
- Granting indemnification
- Seeking indemnification
- Actual or potential
  - patent licensee
  - patent licensor
  - technology licensee
  - technology licensor
Competitive Analysis

- Goal is to
  - track movement of all IP in and out of LSI Logic.
  - track development of technologies at competitors.
  - prepare an IP vulnerability study with respect to
    - Patent
    - Technology or
    - Competitor – potential licensor
  - prepare an IP assertability study with respect to
    - Patent
    - Technology or
    - Competitor – potential licensee
Mapping Patents to Products

- Identify Category of Technology.
- Identify Sub-Category of Technology.
- Identify “Crown Jewels”.
- Identify “Diamonds in the Rough”.
- Look for potential Licensee’s products vulnerable to patent(s).
- Prepare claim charts for the patent(s) most likely to succeed.

- Technology-centric approach.
- Useful for multi-technology portfolio.
- Better equipped to respond rapidly – as patents have been tested.
- Suitable for cross-licensing with large patent portfolios.
Mapping Products to Patents

- Identify potential Licensee.
- Identify Licensee’s products.
- Identify “revenue maker” products.
- Search for all patents in portfolio relevant to the products.
- Determine likelihood of success for each patent.
- Prepare claim charts for the patent(s) most likely to succeed.

- Licensee-centric approach.
- Good for defensive response.
- Allows for better focus if Licensor’s patent portfolio is large and licensee is small.
Conclusion

■ Dynamic strategy.
■ Centralized infrastructure – tools, processes and people - allow flexibility.
■ Institutionalized knowledge base commonly shared for
  ◆ Prosecution
  ◆ Licensing
  ◆ Litigation
■ Align IP strategy with business unit strategy.