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# Assessing High Tech: Observations and Patterns

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LES Nouvelles

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## Assessing High Tech: Observations and Patterns

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The modern business world operates on the widely held notion that by identifying and predicting patterns in the market one can increase one's ability to surf the waves of market success. Hence the LES USA & Canada High Tech Sector (HTS) has launched a multi-part series of papers on trends in its various industrial subsectors. This is just the beginning. We invite contributions internationally to the next edition of this series.

A purpose of the Licensing Executives Society (LES) is to turn our collective awareness into useful content for our profession. It seeks connections and hidden structures. LES has taken a broad view of "High Tech", beyond the traditional bounds of electronics, software, and systems. The rationale is that in today's world, "High Tech" now extends to life science, agriculture, chemical and energy industries, and beyond. Currently HTS recognizes technical subsector committees in: Aerospace & Transportation; Mobile & Consumer Electronics; Clean Tech; Cloud, Content & Communications (3CX); Gaming IP & Technology; Nanotechnology; Semiconductors; and Software. This is not a comprehensive representation of all that could be considered High Tech. However, these self-assembling groups of industries within High Tech serve to identify and focus on internally important market dynamics that would be lost when generalized at sector scale. For example, the advance of technology has rendered digital content inextricable from the manner in which it is transmitted and stored. Similarly, telecommunications has taken on new meanings, and "the cloud" which has been discussed within many subsector committees, is spontaneously generating an intellectual property life of its own. Other technology convergences have led subsector committees to collaborate with each other to discuss topics of mutual interest. Such subsector level interaction has led to meaningful international outreach in aerospace and transportation, software/copyright and M&CE. Increased resolution also puts trends into context.

At a macro-scale, one can identify standard IP and licensing issues that are recognized across industries and sectors. However, at the more granular subsector level, different issues emerge and dominate trends at different times. An appealing and useful construct for comparing and learning across such diversity was presented in a Clean Tech panel discussion<sup>2</sup> at the LES USA & Canada 2012 Winter Meeting<sup>3</sup>. Clean Tech represents a broad enough spectrum of markets so that three stages of market evolution emerge.

- Early Stage: behaviors focus on IP filings, "land-grab" and M&A activity.
  - Questions that often surface are: IP filing strategy, what is being displaced by the business, what could displace the business, what businesses control a key aspect of the supply chain, price point, take to market strategy, and traction gaining strategy?

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<sup>2</sup> Joe Jennings, Drakes Bay Company, LLC

<sup>3</sup> Anaheim, California <http://www.lesusacanada.org/meetings/prior-meetings/2012-winter-meeting>

- Emerging Markets Stage: behaviors such as technology transfers and IP licensing can be observed.
  - Questions that arise are: integration and systems – what inventions will end up where? How will standardization impact product line and IP portfolio? What are the licensing opportunities and threats?
- Mainstream Marketing Stage: behaviors focus on IP licensing, IP sales, IP enforcement and NPE activity.
  - Questions deal with strengthening portfolios, aggregation of patents, (non-practicing entity) NPE activity, and focusing activity on sales versus enforcement.

The above stages can be discerned across sectors and across national boundaries. For example, some High Tech subsectors such as Semiconductors represent well-established industries, while others, such as Nanotechnology are filled with start-up ventures that are yet to establish the field. A final stage completes the picture:

- Mature Market Stage: behaviors continue to focus on IP licensing, IP sales, IP enforcement and NPE activity. However, a decreasing number of companies share the market, and similarly chances for successful start-up companies decrease.
  - Questions focus similarly to the Main Stream Marketing Stage, on strengthening portfolios, aggregation of patents, NPE activity, and focusing activity on sales versus enforcement. However, the answers to these questions can shift with the realities of the Mature Market. .

With such an evolutionary overlay one can compare trends between subsectors. As a consequence it is possible not only to refine the ability to predict change, but also to ask such questions as: How much can one predict? How much is 20/20 hindsight? And, how much depends on a submarine trend that we do not recognize until after it passes? For example, what about government policy that can affect a trend at any stage? Or perhaps more subtly, can cultural trends and choices be perceived? These articles represent the sophisticated analysis of many people with their fingers on the pulse of their industries. Perhaps looking through these many lenses will provide insight and perspective. This first of a series of papers loosely arranged around observations and trends in High Tech provides an engrossing view:

- For Semiconductors, arguably the most mature market of the three, a historical view leads to the best sense of future trends. In “Trends and Opportunities in Semiconductor Licensing”, by Stefan Tammé<sup>4</sup>, Stephen Schott<sup>5</sup>, Dogan Gunes<sup>6</sup>, Jeffrey Wallace<sup>7</sup>, Richard Boadway<sup>8</sup>, Frank Razavi<sup>9</sup>, and Marc Pépin<sup>10</sup>,

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discuss the low incidence of start-up companies, merger and acquisition activity, and the increasing concentration of market share.

- The Mobile and Consumer Electronics Paper “An Outline of Trends in Mobile and Consumer Electronics”, by Ram Menon<sup>11</sup> and Kevin Spivak<sup>12</sup> emphasizes the consequence of the convergence of technologies into a single package of increasingly smaller size. FRAND, Patent aggregators and defensive strategies that border on monopoly concerns are big in this area.
- The Software paper, “Trends and Observations in Software by Susan O. Goldsmith,<sup>13</sup> Ian G. DiBernardo,<sup>14</sup> Frank L. Bernstein,<sup>15</sup> Scott Smedresman,<sup>1</sup> Michael Gulliford,<sup>16</sup> Richard P.W. Stobbe<sup>17</sup> focuses on patent eligibility laws, contrasting US and Canada developments, and then on software applications on interactive screens, or “apps” and data privacy, two increasingly important and mutually intertwined subjects.

And finally,

- “Samsung and LG: From Also-Rans to Dominance in Consumer Electronics”, Robert A. Myers<sup>18</sup>, takes a historical and government policy view of two major Korean firms and discusses how several key decisions made by the government influenced their success.

The High Tech Sector Trends and Opportunities Series presents diverse approaches and visions in that time honored quest for meaningful market trends. It offers an opportunity to develop and share our collective knowledge, which is greater than the sum of its parts. Test your best ideas regarding trends in high tech industries and contribute to the next of this series.

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