

USPTO Satellite Office Proposal

for Southern California located in

San Diego:

A Community of Innovation through Collaboration

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Opening Summary

San Diego presents what we believe to be a compelling business case to the United States Patent and Trademark Office (USPTO) as it considers additional regional satellite offices beyond Detroit in order to expand its human capital capabilities. The region fulfills all the primary goals and requirements of USPTO's satellite office expansion efforts, as outlined in the Request for Comments.

The workforce needed to excel in this effort can be found throughout San Diego, in its high-ranking universities' plethora of outstanding science and engineering graduates and area law schools' scores of patent bar eligible (and interested) graduates. USPTO will have an abundant recruiting pool to fill its highly skilled workforce needs. In addition, the significant presence of Hispanic, Asian/Pacific Islander, African American and military veterans with technological expertise in the region provides the USPTO with yet another rich talent pool from which to recruit.

Once hired, examiners will want to stay in Southern California because of the relatively reasonable cost of living, the high quality of life, and the countless opportunities to easily connect with the areas' scientific, technical, and legal professionals. San Diego has a scientific culture of collaboration, where faculty and student researchers, research institute scientists, and industry researchers from more than 80 world-class research institutions, prominent academic research departments, and industry-leading technology companies frequently interact. Examiners, supervisors, and staff will quickly find that San Diego is a diverse, welcoming community steeped in a culture of working together across disciplines and organizations, which facilitates innovation breakthroughs professionally, as well as developing rewarding personal relationships.

San Diego has creative options for cost-effective, environmentally friendly, GSA-compatible office locations which, combined with personal and professional fulfillment,

will boost productivity allowing the USPTO to attract and retain examiners and aggressively advance efforts to reduce patent application pendency, while simultaneously improving quality. Advanced telecommunications and information technology (IT) capacity enhances options for recruiting examiners who might elect to participate in USPTO's acclaimed telework program.

Because of its unique location on the West Coast, San Diego is strategically located as a gateway to both the Pacific Rim and South and Central America, with many alliances and collaborations already in place. Both internationally and domestically, San Diego presents a highly attractive destination which will further increase the USPTO's opportunities to enhance communication between the Office and the patent applicant community.

This proposal enjoys broad-based support not only from San Diego's government, regional industries, and community leaders, but also from government and community leaders in both Orange County and Los Angeles County. Additionally, San Diego's proposal is endorsed by our neighbors south of the border in Baja California, Mexico.

Great minds and highly creative talents have come from all over the world to call San Diego home. San Diego stands united and ready to welcome the U.S. Patent and Trademark Office into our community of innovation through collaboration.

General Overview

The following section presents an overview of how San Diego addresses and meets the needs of the USPTO's satellite office expansion efforts; greater detail and data can be found in the full narrative which follows this overview.

San Diego boasts a highly-skilled, diverse workforce readily equipped to help the USPTO reduce patent pendency while improving quality

San Diego trains, attracts, and retains a superior, highly-skilled workforce of scientific, technical, and legal professionals providing the USPTO with exceptional recruiting opportunities for decades to come. History demonstrates that once talented professionals arrive in San Diego, they stay for the intellectual environment and to advance innovation, contributing to a community that inspires service and thrives on collaboration.

Nearly a dozen top-tier research universities in the Southern California region produce thousands of science and engineering graduates. A clear majority of graduates from San Diego's research universities stay in the area to start their careers. The Southern California region also produces scores of patent bar eligible law graduates interested in pursuing careers in patent and intellectual property law. All three of San Diego's law schools have multiple programs focusing on intellectual property law and its intersection with entrepreneurship and tech start-up growth.

Beyond university and graduate schools, San Diego's K-12 education system is aggressively advancing novel STEM programs to ensure that the region's young innovators are ready to assume the mantle of innovation leadership pioneered by their parents and grandparents. Between public, private, and charter schools, San Diego's K-12 education system promotes 40 unique STEM development programs. A list of some of the programs can be found [here](#).

Beyond the flourishing K-12, college, graduate degree, and law school recruiting pipeline, San Diego is home to one of the largest concentrations of military personnel outside of the Washington D.C. metro area. Today's military veterans have advanced skills in various technology sectors and have already shown a propensity for government service.

Cultural diversity in the military dovetails seamlessly with the cultural diversity of San Diegans. In fact, San Diego's combined composition of Hispanics, Asian/Pacific Islanders, and African Americans outpaces the Caucasian population. More than 100

languages are spoken by San Diegans who have come from all over the globe to live and work in this cosmopolitan environment. Diversity of culture also brings diversity in thought patterns and analytical perspectives that carry research investigations to a higher dimension. Coupled with the linguistic capacity of military veterans, the diverse population can provide a key asset to the USPTO related to current and future language translation challenges.

A Southern California USPTO Satellite Office in San Diego benefits greatly from the multitude of recruitment options to accomplish its strategic goal of building a highly skilled and stable workforce to help reduce patent application pendency and improve quality.

San Diego's culture of collaboration and high quality of life result in stable careers which will increase USPTO production

A diverse workforce with superior expertise across the sciences comes to San Diego to advance innovation and invariably puts down roots and stays. One reason people stay is to take on major intellectual and societal challenges, or as President Obama stated, to "...do big things." Successfully tackling major societal challenges like new life sciences cures, efficient alternative energy, and defending the U.S. in cyberspace demands undertakings beyond the capacity of one individual. Fortunately, San Diego's research and innovation ecosystem is infused with a culture of collaboration that knows when to set aside competition to advance the greater good.

The dense geographic corridor that houses the backbone of San Diego's innovation research community on the Torrey Pines Mesa fosters an interconnectedness which leads to synergies of multidisciplinary and multi-institutional research and development endeavors. Further advancing this culture are the regular and numerous events of many kinds that occur, oftentimes in nice weather, that keep intellects sharp, exploring, and sharing ideas. On any given day, universities, research institutions, trade organizations, start-up accelerators, capital funding associations and tech companies sponsor educational and research seminars and networking events on various subjects including the latest emerging discoveries, IP considerations, and commercialization possibilities.

Collaborative undertakings are routine in San Diego's innovation community and will give patent examiners a seat at the table as cutting-edge breakthroughs continue to proliferate in the region. The patent examination process and communication with the applicant community will be enhanced as trainers and examiners interface with emerging ideas and technologies and the researchers that are developing those ideas.

Satisfaction and stability goes behind the job, no matter how stimulating it may be. Another reason San Diegans stay is because of the high quality of life. In addition to “perfect weather,” examiners, supervisors, and staff will find no shortage of activities and attractions to help them maintain the proper work/life balance.

Another aspect of the high-quality of life is the affordable standard of living San Diegans enjoy. San Diego’s average non-tech sector wages is just over \$46,000 per year. Although tech sector wages outpace that salary, patent examiner salaries are extremely competitive in this market. Examiners in the upper steps of Grade 11 and 12 pay bands will find their salaries close to or above the average tech sector wage. Thus, an examiner in a San Diego satellite office might be less prone to “revolving door” offers as they would be in other parts of California or the western U.S. The revolving door might be further halted in a San Diego location because area IP law firms have shown a limited propensity for hiring large numbers of patent agents into their firms.

Whether it’s an opportunity to further expand one’s understanding of technology discoveries, a high-quality of life or the competitive wages that allow long-term career stability, retention challenges the USPTO now faces will have a greater chance to be ameliorated in San Diego than in other parts of California or the western U.S.

San Diego provides cost-effective options for establishment of a satellite office as well as a community ready to embrace the USPTO

San Diego’s government, industry, and community leaders are prepared and ready to assist the USPTO in a transition to the area. Numerous affordable and flexible choices exist for everything from office space to public transportation allowing the USPTO to explore various options to best accommodate strategic needs and negotiated requirements.

One of the city’s greatest assets is the extremely convenient airport that is nestled in the heart of the city on the coast. Once exiting the airport, the commute to downtown is a short ten minute drive and too much of the innovation community, it is as short as twenty minutes. This is hard to beat in most other regions in California and the western U.S. The consistency of sunny, warm weather allows the award-winning airport to operate without fear of snow, or other regular weather patterns snarling travelers. The ease of air travel and the lure of San Diego as a top tourist destination, can only serve to enhance communication between the USPTO and the applicant community.

Since California is far and away the leading state for patent activity, a San Diego location for a satellite office affords the state’s patent community multiple convenient

air, rail, and car travel options to increase interaction with the USPTO's largest domestic applicant constituency.

If downtown San Diego is selected as the site for a satellite office, there are four Class A high-rise office building options, each of which are either LEED or Energy Star certified and already have federal agency tenants in occupancy. Comparison of Central Business District office space rates reveal that San Diego is competitive with, or below, other western U.S. cities, which will save taxpayer dollars.

As a leading telecom innovation region, San Diego is also equipped to assist the USPTO's expansion of its already successful telework program. Telework is already accepted as a legitimate alternative for San Diego employers and welcomed by employees.

Summary Conclusion

This proposal should properly be viewed as a regional proposal with the specific location for a potential office in San Diego. Government and community leaders from Orange County, directly to the north, and Baja California, Mexico, across the border directly to the south, have endorsed the San Diego location.

The region's long-standing relationship with the military signals to USPTO leadership that San Diegans have a deep and abiding respect for government service. Thus, San Diegans are already adept at embracing federal operations like a USPTO Satellite Office.

The following pages will add detail, data, and context to the arguments presented here and explain in-depth how San Diego accomplishes all the primary goals the USPTO is seeking in its Nationwide Workforce Program. The U.S. Patent and Trademark Office

should join other great innovators in joining San Diego's community of innovation through collaboration.

Introduction

The Framers of the Constitution appreciated the importance of fostering intellectual property, explicitly protecting innovative creations by directing Congress:

“To promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries.”

U.S. Constitution, Article I, Section 8

In arguing for the ratification of the Constitution, James Madison concluded that “the utility of this power will scarcely be questioned.” Madison’s observation was exactly right; intellectual property serves as the backbone of the modern American innovation ecosystem. The U.S. Patent and Trademark Office is a key facilitator in the realization of the Constitutional intellectual property right.

Establishing a San Diego USPTO Satellite Office will build a mutually beneficial relationship between the USPTO’s east coast headquarters and the far western region of the U.S., helping to bridge the gap between west coast innovators and the patent examination process. Since California far outpaces the rest of the U.S. in patent activity and represents the largest patent applicant community in a single state, a California office is a logical choice for the next location. This proposal will demonstrate why San Diego has the most balanced business case to achieve the human capital and operational goals of the next USPTO Satellite Office.

Detail, Data, and Context Narrative:

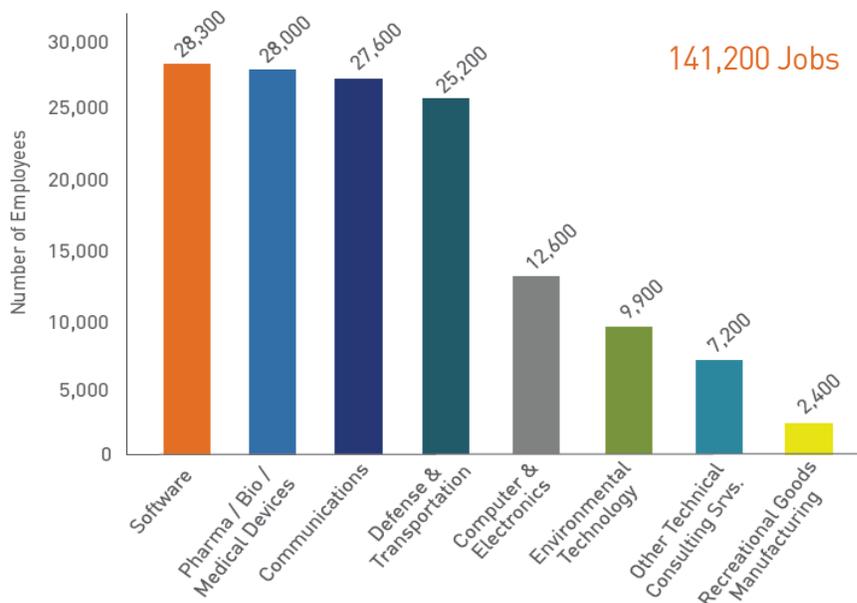
Diverse and highly-skilled science, technical and legal workforce

- Workforce comprised of science, technical, and legal professionals that come to region and stay to advance innovation
- Community attracts diverse cultures leading to strong minority representation in professional and scientific fields
- Superior workforce plus new graduates from top-tier universities enables USPTO to meet its human capital demands

San Diego attracts, trains, and retains a superior, highly-skilled workforce made up of science, technical and legal professionals that advance innovation and are well-equipped to assist the USPTO in achieving its mission of reducing patent application pendency and improving patent quality.

San Diego already hosts a robust technical workforce comprised of high-level scientists, engineers and other technical professionals. As of April 1, 2011, San Diego employed over 141,000 tech-sector professionals in the region, accounting for 11% of the region's workforce. See Figure 1A

Figure 1A: San Diego Tech Employment by Industry – as of April 1, 2011



San Diegans are generally well-educated: 40% of San Diego's adult population holds a bachelor's degree or higher. Feeding into this rich talent pool of tech sector workers are an expansive network of leading universities. Including universities in nearby Orange County, the region boasts over a dozen top research universities including, the University of California San Diego, UC Irvine, UC Riverside, San Diego State University, University of San Diego, Cal State San Marcos, National University, Point Loma Nazarene University, Cal State University Fullerton and Chapman.

San Diego's universities offer more than 70 degree, advanced degree and advanced certification programs focused on science, technology, engineering and math (STEM). Such a broad offering of university STEM programs creates an assorted array of recruiting opportunities for the USPTO.

University of California, San Diego

On an annual basis, the Jacobs School of Engineering at UC San Diego confers over 400 graduate degrees and 700 undergraduate degrees. The Jacobs School has 18 of its 192 faculty as members of the National Academies; is ranked No. 13 among the nation's top 191 engineering schools according to *U.S. News & World Report*; and is ranked No. 9 internationally according to the 2009 Academic Rankings of World Universities conducted by Shanghai Jiao Tong University in China. As of March 2011, *U.S. News & World Report* ranked UC San Diego as the No. 8 best public university in the nation and among the nation's top 50 universities.

The National Science Foundation ranks UC San Diego No. 7 in the nation in federal research and development expenditures. UC San Diego's faculty and alumni have spun off at least 200 local companies, including more than one-third of the region's biotech companies.

UC San Diego's biological sciences, bioengineering and biomedicine Ph.D. programs are the top three doctoral programs in the United States. UC San Diego's Health Sciences department trains medical scientists, M.D.s, Ph.D.s, and Resident and Clinical Fellows at the UC San Diego Medical Center, which has been named among the best in the nation for the 17th year in a row by *U.S. News & World Report*. The Skaggs School of Pharmacy at UC San Diego boasts clinical teaching facilities including UC San Diego affiliated teaching hospitals, outpatient clinics and other institutions in the San Diego area.

In 2010, the top five inventions at the University of California system's 10 campuses brought in \$43.3 million in royalties. One-third of those royalties, or \$14.3 million, went to UC San Diego for two major discoveries—one related to cancer treatment and the other to bladder pain. The UC San Diego campus also had the highest number of active inventions boasting a grand total of 2,660 in 2010.

San Diego ranks third in the nation as an engine for the development of biotechnology products. Surrounding the UC San Diego campus are numerous research and development companies devoted to biotechnology and pharmaceutical development. Feeding these companies with talent are institutions like the UC San Diego Department of Chemistry and Biochemistry, which has 20,000 students enrolled in chemistry courses, including 1,200 majors in 9 undergraduate degree programs, 240 students in three graduate programs and over 100 postdoctoral scholars.

UC San Diego runs the IDEA Center on campus which seeks to increase K-14 student knowledge and interest in engineering and motivate them to pursue higher education in an engineering field; increase applications and enrollments of historically underrepresented groups to the Jacobs School of Engineering; improve the success, retention, and graduation of historically underrepresented and economically or socially disadvantaged students; and promote participation of undergraduate students in engineering research as a means of enhancing academic performance, developing key relationships, and increasing retention.

UC San Diego's education mission does not end with its college and graduate school students. UCSD also runs a successful Extended Studies and Public Program which seeks to serve the critical lifelong knowledge and skill development needs of individuals, organizations, and the community. UC San Diego Extension is focused on being a major catalyst for the continued economic, intellectual, and cultural growth of the San Diego region through continuing education and degree-related programs; community initiatives that support economic and social development through a wide array of public service lectures, forums, and special events delivered on campus, at off-campus sites, and through print, internet, radio, and television. Core offerings include professional education and training, cultural enrichment, and regional economic solutions.

San Diego State University

San Diego State University's College of Engineering offers seven undergraduate and six graduate engineering degrees including a joint doctoral degree with UCSD. The joint

doctoral program confers degrees from both institutions and is co-taught by faculty from both universities. Areas of concentration include bioengineering, applied mechanics, computer and electronics, and structural engineering. SDSU's College of Engineering graduates more than 1200 STEM undergraduate and more than 400 graduate students per year.

Recently, the college was awarded a prestigious National Science Foundation Award of over \$18 million to establish an NSF Engineering Research Center for Sensorimotor Neural Engineering. The grant will focus the college's research on decoding how the brain instructs complex body movements. Additionally, planning is underway to open the Zahn Center for Engineering Innovation to highlight the intersection between STEM and entrepreneurship.

SDSU ranks among the top universities for economic and campus ethnic diversity according to U.S. News and World Report's "America's Best Colleges 2012." In June 2011, SDSU ranked No. 13 in the nation for bachelor's degrees conferred to ethnic minorities. As of May 2011, SDSU ranked No. 7 in the nation and No. 2 in California for bachelor's degrees awarded to Hispanics. The university also ranks No. 25 in the nation for master's degrees awarded to Hispanics. In 2010, SDSU ranked No. 3 among security and protective services programs nationwide for bachelor's degrees awarded to Hispanics according to "Top 100 Colleges for Hispanics" from Hispanic Outlook.

Since 2006, SDSU College of Engineering and College of Sciences awarded a total of 7,556 undergraduate degrees and 2,185 graduate degrees in these fields. Of this, SDSU has awarded degrees from the College of Engineering and College of Sciences to the following ethnicity groups as outlined in Figure 2B

Figure 2B: SDSU Degrees Granted by Degree Level and Ethnicity - College of Engineering and College of Sciences - 2005-06 through 2010-11

	Undergraduate	Graduate	Grand Total
American Indian	53	6	59
African American	280	28	308
Hispanic	1779	109	1888
Asian	625	206	831
Pacific Islander	45	4	49

Filipino	547	36	583
Multiple Ethnicities	12	2	14
White	3198	772	3970
Other/Not Stated	836	238	1074
International	181	784	965
Grand Total	7556	2185	9741

In addition, SDSU is known as one of the most military-friendly campuses in the nation, having established the SDSU Veterans Center, the first such center in the California State University system, and the first on-campus veterans' housing in the nation. SDSU has expanded its effort to establish programs such as the SERVICE Program (Success in Engineering for recent Veterans through Internship and Career Experience). This program is designed to place SDSU veteran students into private sector engineering internships to gain real-world experience, provide outreach to active duty military prior to separation to increase awareness regarding engineering careers, and provide pre-engineering courses on military bases. SDSU currently has 147 student-veterans pursuing engineering degrees of which 60 are part of the SERVICE Program

SDSU's College of Science offers coursework in modern research centers spanning 9,000 acres, comprising of biological science research stations, observatories and coastal waters laboratories. The college awarded 1,250 science degrees in 2010, including 207 masters and 21 doctoral degrees.

Both UCSD and SDSU students stay in the area post-graduation. Almost 50% of UCSD graduates stay in San Diego to contribute to the innovation economy. This represents a net gain for the San Diego workforce because 40% of UC San Diego's students come from Los Angeles and Orange County. According to SDSU, 79% of respondents to a survey of recent graduates said they remained in San Diego after graduation.

University of San Diego

University of San Diego's (USD) School of Engineering offers nine-semester programs of study leading to a dual B.S./B.A. in Electrical Engineering, Industrial and Systems Engineering, and Mechanical Engineering. As of Fall 2011, there were 302

undergraduates studying engineering. Forty-seven percent of the most recent USD graduates who reported remained in San Diego, and then to Orange County or Los Angeles.

USD hosts a diverse student body in science and engineering undergraduate majors. In the Fall of 2011, USD was home to 408 undergraduate students pursuing degrees in the STEM fields. Of the 408, 139 were from minority groups.

USD's College of Arts & Sciences received a \$600,000 NSF grant to boost ranks of female science and technology professors, particularly those of color. The five-year grant called the Advancement of Female Faculty: Institutional climate, Recruitment and Mentoring (AFFIRM) is aimed to boost efforts to recruit women, especially those of color, in science, technology, engineering and mathematics (STEM) as well as the social and behavioral sciences.

Point Loma Nazarene University

Point Loma Nazarene University currently enrolls 360 students in STEM majors. Approximately 50% of graduating students go to graduate school, including medical school. Point Loma graduate acceptance rate into medical/dental/veterinary school is over 90% and has been for a number of years.

Point Loma Nazarene offers many programs to encourage STEM education, including but not limited to:

- ***Science Honors' Weekend (SHW)***: SHW is a yearly recruiting event for incoming biology, chemistry, environmental science, physics, engineering, mathematics and computer sciences' students that qualify, based on GPA and SAT/ACT scores. This weekend is designed to encourage students in their science and math interests, to help them make informed decisions about their futures, and to judge their eligibility for some special scholarships.
- ***University NOW***: University NOW is a biology and writing course offered to local underprivileged high school students. The goals of the program are to help students envisage themselves as college students, and to get a head start on university-level material.

California State University, San Marcos

Cal State San Marcos (CSUSM) includes over 100 tenure-track and lecturer faculty in 5 departments, and offers 7 Bachelor of Science degree programs, several with multiple tracks, as well as 4 Master of Science degree programs.

CSUSM faculty bring in approximately \$2.2M annually in external research support. Over the next 5 years, CSUSM expects to increase the size of its faculty by approximately 10%, undergraduate enrollment by 20%, and graduate enrollment by 15%.

The newly formed College of Science and Mathematics on Cal State San Marcos' campus (CSUSM) was officially established in late 2010 and promotes the vision exemplary teaching, innovative curricula, and excellence in research. The College of Science and Mathematics has five departments, one emerging program, twelve degree programs, and several interdisciplinary research centers and institutes. In the University's 20-year history, the departments within the College of Science and Mathematics have produced ~1400 degreed professionals.

As a graduate from California State University San Marcos, entry level jobs as a Research Assistant or Senior Lab technician with a BS range from \$39k to \$44k. With a Masters in Biotech, the entry level positions are even higher, holding in the \$45k to \$49k range. Two recent Masters graduates started at \$45k as a Quality Control Specialist and at \$47k as a Manufacturing Chemist. Internships for recent baccalaureates at institutes or companies range from \$12/hour to \$14/hour.

CSUSM offers many educational resources which promote learning in the technical and scientific sectors on and off-campus, including but not limited to:

- ***Office of Biomedical Research and Training (OBRT)***: OBRT provides a supportive multicultural environment for student and faculty career development in the biomedical sciences and related disciplines. This office also sponsors programs that focus on science education, student support services, research training, and research participation.
- ***W.M. Keck Foundation Center for Molecular Structure (CMoIS)***. CMoIS is a full service and comprehensive X-ray diffraction facility serving the 23 campuses of the California State University system as a core facility of the California State University Program for Education and Research in Biotechnology (CSUPERB) consortium.
- ***CyberQUEST***: This project implements strategies for broadening participation in cyber-based activities through both teacher cyberinfrastructure (CI) expertise development and student CI-supported geosciences learning experiences at the middle school level. The CyberQUEST project engages 16 middle school science

teachers in a two-year program that includes week-long summer academies, collaborative lesson study rotations, ongoing mentoring and classroom support.

- ***Center for Science Innovation and Entrepreneurial Education:*** The Center is a nexus for advancing science and technology in North San Diego and Southwest Riverside Counties as an idea to product to business incubator. Still in its formative stages, the Center will deliver a wide range of programs and services to catalyze innovation and entrepreneurial activity at California State University San Marcos and in the surrounding region. The Center will provide means for partnering faculty and local industry to advance and commercialize new technologies, as well as assistance to innovators, entrepreneurs, and researchers to launch new ventures, commercialize new technologies, and secure access to capital from private and public sources.

San Diego's higher education institutions grant 16.5% more bachelor's degrees, 24.2% more master's degrees and 6% more Ph.D.s than the national averages for all colleges and universities.

In addition to STEM graduate and undergraduate programs, the San Diego region hosts prestigious law schools that emphasize intellectual property law and its intersection with entrepreneurship and tech start-up growth. San Diego's three law schools, University of San Diego School of Law, California Western School of Law and Thomas Jefferson School of Law, collectively retain approximately 185 full-time and adjunct law professors, of which 38 are specifically IP professors who teach 116 specialized courses in intellectual property and corporate commercialization.

High-quality Law Schools focus on IP

University of San Diego School of Law

University of San Diego School of Law (USD) is a nationally-recognized center of legal education and academic excellence. Accredited by the American Bar Association, the law school is a member of the Association of American Law Schools and The Order of the Coif, the most distinguished rank of American law schools. USD has one of the highest-rated law faculties in the United States, ranking among the top three private California law schools based on scholarly activity and No. 22 in scholarly reputation in a survey of leading law academics. In addition, 11 faculty members belong to the American Law Institute, a renowned law reform group.

In 2011, approximately 320 USD law students received a J.D. degree and approximately 100 students will receive an LL.M. degree from the University of San Diego School of Law. On average, 12.5% of each USD JD class is patent bar eligible, holding hard science or technical undergraduate degrees. Of these, over 20% have advanced degrees (M.S. or Ph.D.) in their IP fields. Almost 60% of USD's 2010 patent-bar eligible graduates are currently working in IP law arenas or as federal judicial clerks. Of these, over 80% are employed in Southern California. Approximately 60% of USD Law graduates stay in or near San Diego County after graduation and approximately 80% of USD Law graduates remain in California.

In addition USD offers its students access to IP-focused legal clinics and established IP centers such as:

- ***Entrepreneurship Clinic:*** Through the Entrepreneurship Clinic, students provide pro bono legal services to low- and moderate-income entrepreneurs who want to commercialize their innovations.
- ***Technology Entrepreneurship Clinic:*** The Technology Entrepreneurship Clinic (TEC) provides USD law students hands-on, real world experience assisting new businesses with a technology focus. Students work side-by-side with respected practicing attorneys from IP law firms throughout the region to help start-ups with corporate, intellectual property and employment legal needs.
- ***Center for Intellectual Property Law & Markets:*** The Center for Intellectual Property Law & Markets (CIPLM) trains students on the fundamentals of intellectual property laws and the ways clients use intellectual property (IP) rights to compete in real-world markets. USD's focus on the role of IP rights in markets distinguishes it from other, more traditional IP centers. It also provides a forum where lawyers, clients, judges and policymakers can share ideas about IP doctrines and policies. The Center's policy workshops also provide opportunities for students and community members to engage in discussions about current IP policy issues, focusing on the intersection between economic analysis and IP policy.

California Western School of Law

California Western School of Law (CWSL) was founded in 1924 and is accredited by the American Bar Association and a member of the Association of American Law Schools. In 2011, it will have approximately 298 J.D. graduates. On average, 61% of each CWSL graduating class stays in Southern California. Since 2006, 19% of CWSL graduating classes are currently practicing IP law. Over 90 percent of CWSL's IP graduates stay in San Diego to practice law or engage in patent-related business matters.

California Western School of Law offers an area of concentration in IP, Telecommunication and Technology Regulation. The concentration enables students to obtain a solid foundation in the core areas of IP and encourages practical experience of the law through internships and pro bono work.

In addition, CWSL's Center for Intellectual Property, Technology and Telecommunications studies issues of law and policy that arise as a result of continuing technological advances in the world innovation economy. The Center prepares students to be cutting edge entrepreneurs and transactional lawyers in trans-border licensing, biotech, informational technology, biofuels and telecommunications. The curriculum is interdisciplinary and includes 12 courses that have a major IP component in business, international business transactions, entertainment and E-commerce.

CWSL students participate annually in mediation and negotiation competitions that focus on IP-related issues, and present white papers at an annual conference on entrepreneurship and licensing issues for businesses who are trying to expand their markets internationally. From these conferences, students have found internships at USPTO, San Diego Port Authority, World Trade Center of San Diego and UC San Diego's Technology Transfer Office, to name a few. The Center has also recently launched a Clinical Law Placement Program to encourage students to look into nontraditional legal careers and entrepreneurship.

In the 2010 the Center launched "*Create a Job Initiative*" to stimulate entrepreneurship and job creation through trans-border licensing. The mission is threefold:

- Hold a series of annual conferences focusing on different industries and new job opportunities that can be created, e.g. social networking, trans-border licensing and technology transfer;
- Engage alumni to mentor students by expanding the internships and career service programs into nontraditional legal areas;
- Use technology to develop pilots with foreign educational institutions that will build trust relations and collaboration on how to create and commercially market intellectual property. Students are in the process of launching an interactive, online platform that will be a Virtual Protocol to link and connect with entrepreneurs, lawyers' prospective clients, customers and trade associations to educate on policy and regulatory licensing issues.

Thomas Jefferson School of Law

Thomas Jefferson School of Law (TJSL) also recognizes the importance and necessity of exposing students to the principles of intellectual property (IP) law and capitalizes on its proximity to industry professionals in order to make student offerings relevant and rewarding.

TJSL dedicates nearly a quarter of its full-time faculty and several adjunct professors to IP courses, ranging from basic to highly specialized. The school's Center for Law and Intellectual Property (CLIP) offers a certificate program for students specializing in IP law and coordinates events throughout the year to bring students in contact with local IP professionals. CLIP encourages research, dialogue, debate and sustained study of IP issues. TJSL works closely with students with an undergraduate or advanced degree in science or engineering and an interest in pursuing IP by offering an Intellectual Property Fellowship Program to eligible students. The program offers students customized IP-related courses and moot court membership, as well as provides qualified students with substantial scholarship awards.

The Intellectual Property Association, a TJSL student organization, provides additional opportunities for student contact with IP professionals and training in all branches of IP law. In 2010, William Mitchell College of Law ranked TJSL 15th in the nation for its IP course offerings, which ranks higher than schools such as UC Berkeley, UC Hastings and Stanford Schools of Law.

All law schools have competitive law clerk and internship programs that offer academic credit for student work within a government entity like the USPTO. These established programs could be utilized by a San Diego Satellite Office to expand upon the USPTO's Patent Experience Externship Program (PEEP) by increasing their available workforce without increasing overhead expenses, training their future examiners by giving law students first-hand experience in a PTO setting. The University of San Diego School of Law, California Western School of Law and Thomas Jefferson School of Law all believe that real-world practice and implementation of the theories learned in the classroom is a vital part of the law school curriculum. Therefore, all schools stand ready to help develop a competitive and targeted law clerk program with a local San Diego patent office PEEP program.

Figure 3A below outlines the mean salaries of San Diego law school 2010 graduates in the Government and Public Interest Sectors

Figure 3A: 2010 Mean Starting Salary of San Diego Law School Graduates

*includes judicial clerkships

Employer Type	USD	CWSL	TJSL
Government	\$45,518	\$58,758*	\$51,000*
Public Interest	\$45,074	\$60,970	<i>Data Unavailable</i>
Judicial Clerk	\$58,250	<i>See above</i>	<i>See above</i>

Military veterans provide another recruiting option

Beyond the region’s outstanding engineering, science and law schools, USPTO can also draw from the hundreds of military veterans that have specialized skills and have also shown a propensity to serve their country through government employment. San Diego is home to one of the largest concentrations of military personnel outside of the Washington D.C. metro area.

Like never before, today’s military veterans have advanced skills in various technology sectors that examiners face and will face in the future particularly related to cybersecurity, electronics, aviation, IT, communications, and other defense technologies. The Navy’s Space and Naval Warfare Systems Command (SPAWAR) resides in San Diego and leads the Navy’s Information Dominance Systems Command. As such, SPAWAR is a top patent holder in the area. SPAWAR employs over 3,000 science, engineer, and technical professionals and contributes to \$555 million in direct salaries in San Diego.

A recent study reported that over 99,000 San Diego County veterans have an associates degree, and 78,000 hold a bachelor’s degree or higher. San Diego remains committed to retraining our veteran workforce by providing programs that assimilate them into the

San Diego innovation economy with high-quality, good-paying jobs where they can continue their history of service.

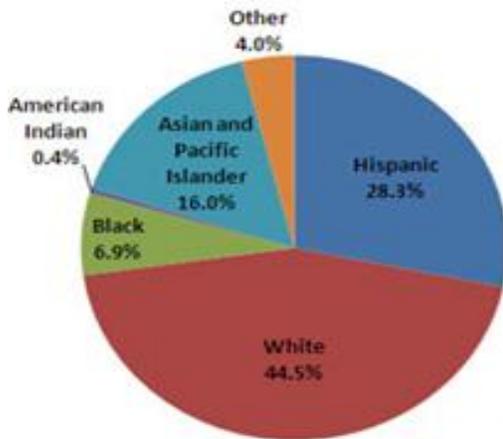
Programs such as the SDSU SERVICE Program mentioned below and the REBOOT Program seek to successfully transition San Diego's large veteran population from service to civilian life while helping them to capitalize on their technical and scientific expertise they acquired while serving our country. The REBOOT Program is an emerging San Diego-based 501 (c)(3) organization dedicated to assisting veterans in adjusting to civilian life and securing meaningful employment by combining best-practice performance social solutions and techniques. The program assists veterans in making a successful transition from military service to civilian life, with all veterans achieving, within their potential, their goals in the transition domains of employment and career, education and community-life functioning. San Diego is home to the nation's largest number of Iraq and Afghanistan veterans returning from active duty and the Project targets those 28,000 veterans leaving the military each year in San Diego (200,000 nationwide). Nearly 400 service members have benefited from the program to date; it is currently booked through April 2012 and an additional 350 service members are on the waiting list. The programs founder was recently honored by the White House as a "Champion of Change."

SPAWAR SSC Pacific alone employs 1,140 veterans, 27% of its total San Diego workforce. They are also an active participant in the Wounded Warriors Program and have recently hired 8 veterans from that program.

Diversity in workplace enhances new perspectives

Living in a diverse multi-cultural community is another reason talented people are increasingly calling San Diego home. With its close proximity to Mexico and easy access to Pacific Rim nations, San Diego is increasingly becoming one of the most ethnically and culturally diverse places in the nation. More than 100 languages are spoken by San Diego residents who have come from all parts of the world to live and work in this cosmopolitan environment. This cultural and linguistic diversity can be an asset to the USPTO as it faces translation challenges with the continued growth in foreign patent applicants. Figure 4A shows the breakdown of the San Diego population by ethnicity as of August 2010 which reveals that a combined majority of San Diego's residents represent differing ethnic minorities.

Figure 4A – San Diego Ethnic Population – August 2010



San Diego also boasts an ethnically diverse business population. According to the Southern California Minority Business Development Council, there are 76,718 minorities employed in Southern California alone of which 20.6% are in the professional, scientific, and technical services sector. Figure 5A from the US Census Bureau demonstrates San Diego’s high percentage of minority-owned and women-owned businesses in the region.

Figure 5A: US Census Bureau – San Diego Socio-Economic Report

Minority-owned businesses	San Diego	California	USA
Black-Owned	2.9%	4.0%	7.1%
American Indian and Alaska Native Owned	1.3%	1.3%	0.9%
Asian Owned	8.0%	12.8%	4.8%
Native Hawaiian and other Pacific Islander Owned	0.3%	0.3%	0.1%
Hispanic Owned	15.2%	16.5%	8.3%
Women-Owned	29.9%	30.3%	28.8%

According to the National Association of Women Business Owners, women-owned businesses represent the fastest-growing segment of the economy. Nearly 89,000 San Diego entrepreneurs are part of an industry of 10 million female business owners, nationwide. In San Diego County, about 30 percent of all businesses are owned by women, according to U.S. Census data while California has more than 1 million women-owned businesses, exceeding any other state.

There are also many organizations in San Diego dedicated to helping minority-owned and women-owned businesses in the region. The San Diego Regional Minority Supplier Development Council, is a nonprofit organization dedicated to bringing corporations and minority business enterprises (MBEs) together for the economic benefit of both. Both the San Diego Asian Business Association and the San Diego County Hispanic Chamber of Commerce provide assistance to their members for growing their businesses.

SPAWAR also offers a successful small-business program for socio-economic disadvantaged groups. The SPAWAR Office of Small Business Programs (OSBP) provides training, advice, guidance and innovative strategies ensuring quality solutions for TEAM SPAWAR acquisition teams while maximizing opportunities for small businesses. OSBP is especially committed to maximizing procurement opportunities for minority-owned, women-owned, and veteran-owned businesses as well as Historically Underutilized Business zones (HUBZones). In 2010, SPAWAR awarded 24,996 contracts of which 41.87% were awarded to small businesses. Total obligated dollars in 2010 for SPAWAR was \$6.05B, of which small businesses were given 20.06% or \$1.21B. Of the \$1.21B, over 13% were given to socio-economic disadvantaged companies including minority-owned, women-owned, and veteran-owned businesses, and Historically Underutilized Business zones (HUBZones).

San Diego's superior and diverse workforce comprised of experienced talent and new graduates in both the technical and legal fields creates an opportunity for the USPTO to access a multi-faceted talent pool of trainers and examiners that can bring the U.S. patent examination process to the next level of performance.

Culture of collaboration permeates world-class research institutes

- Thriving cluster of world-class research institutes attracts top-level researchers, scientists and engineers from around the world
- Home to a broad range of corporate R&D departments drawn to the region due to the robust academic and research environment
- Patent examination process will be enhanced as trainers and examiners interface with cutting-edge ideas and technologies being developed in San Diego's research community

San Diego is home to some of the world's most prestigious research institutes which foster a talented workforce, draws world-class laboratories to the region and creates a training ground for early stage ideas to develop into viable products and new companies.

San Diego's research corridor on the beautiful Torrey Pines Mesa has served as a springboard for technological and entrepreneurial business development helping to generate and transform innovative ideas into breakthrough products. San Diego is home to 83 research institutes which are situated in a dense geographic region which has birthed a collaborative culture where scientific disciplines collide in a productive, synergistic way, as shown in Figure 6A on next page.

Figure 6A: San Diego Research Institutes



The Mesa is home to numerous world-renowned institutes including the Scripps Research Institute, Salk Institute, Sanford-Burnham Institute for Medical Research,

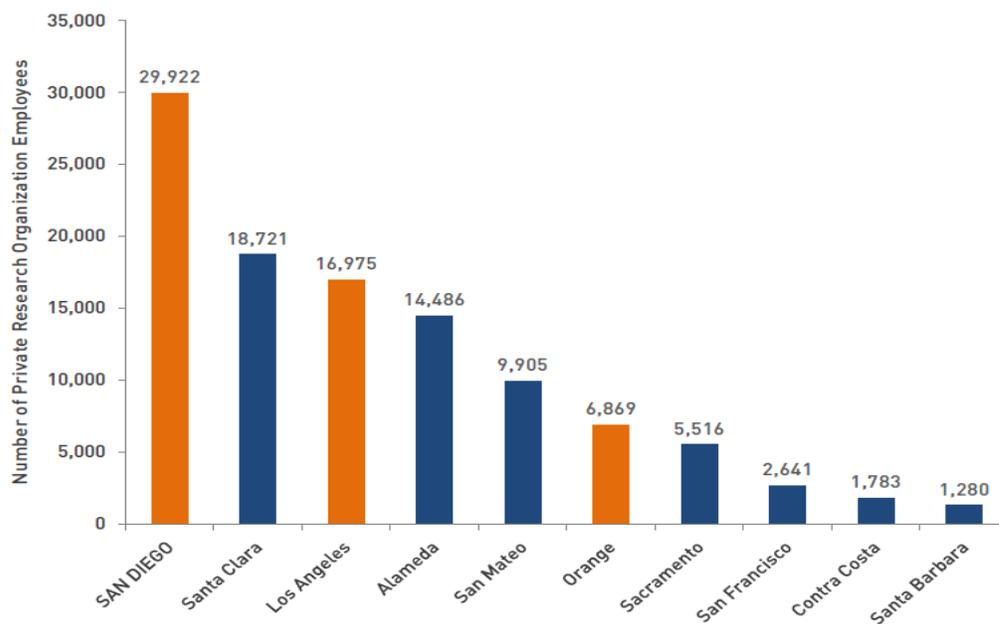
Scripps Institution of Oceanography (SIO), California Institute for Telecommunications and Information Technology (Calit2) and SPAWAR, the Navy's principle research institute. See full list of research institutions [here](#).

This thriving cluster of world-class research institutes has attracted top-level researchers, scientists and engineers from around the world to San Diego. Collectively San Diego's research institutes secure more than \$2.5 billion in federal research dollars annually to advance new studies and ideas and produce next-generation solutions and technologies. As of 2010, San Diego was awarded over \$86,000 in SBIR/STTR Awards. The large amount of research funding coming into San Diego annually will ensure the research community continues to grow and attract leading researchers, scientists and engineers to the region to participate in groundbreaking research and projects.

San Diego County leads California in private research organization employment. The latest available data shows San Diego County leads the state in private research organization employment. San Diego private research organizations employed almost 30,000 workers according to the most recently available data from the U.S. Department of Labor (Q1 2011). Santa Clara ranked second with more than 18,700 and Los Angeles was third with almost 17,000.

Southern California private research organizations employed almost 57,000 employees in the first quarter of 2011 compared to the 54,000 employees in the northern California region as seen in Figure 7A.

Figure 7A: Top 10 Counties in California Ranked by Private Research Organization Employment – 1st QUARTER 2011



4 of the top 10 institutions in terms of NIH funding are headquartered in San Diego. According to a recent study by Thomson, San Diego is home to 3 of the ten most cited research institutes in the world in the important fields of biology and biochemistry – Salk Institute, Sanford-Burnham Institute, Scripps Research Institute.

San Diego's research universities play a huge role in San Diego's IP reputation. The Sanford-Burnham Institute generates a new patent application every ~3.6 days, while the Salk Institute held over 720 patents and 236 licenses in their portfolio from July 2010-June 2011. Salk boasts a high-caliber workforce including 7 Nobel Laureates, 3 Albert Lasker Awardees ("American Nobel Prize"), 16 National Academy of Science Members, 8 Institute of Medicine Members, 2 National Academy of Engineering Members, 1 National Medal of Science and 9 HHMI Investigators.

Salk has approximately 900 faculty, staff, and postdocs. The Alumni from the Salk Institute group on LinkedIn has 309 members, 42% are in the greater San Diego area and 41% are in Research (function) and 40% list their industry as Research. Other industry areas include 30% in Biotechnology, 11% in Pharmaceuticals and 5% in Higher Education.

Scripps Institution of Oceanography is one of the oldest, largest, and most important centers for ocean and earth science research, education and public service in the world. The institution's expenditures rose nearly 50% over the past five years, and their investigators bring in roughly \$125 million in research funds each year. Scripps operates one of the largest academic research fleets in the world, and is home to nearly 250 graduate students, 850 non-academic staff, and 500 academics. Last year, postdocs ranked Scripps among the top 40 U.S. institutions listed as "Best Places to Work in Academia" in the March 2011 issue of the Scientist magazine.

SPAWAR, the Navy's principle research institute, employs many renowned scientists, researchers, and engineers who are among the nation's top innovators in a wide field of scientific disciplines. Today, they employ over 420 scientists and engineers and technicians and boast a highly-skilled workforce with 146 Ph.D. and 621 Master's degrees. Four SSC Pacific personnel received the Department of Navy's 2009 and 2010 Top Scientists. SPAWAR alone brought in \$1.135B in total funding for fiscal year 2010. More than \$1B in funding went to industry of which 35% went to small businesses. Contract Values in 2010 for the Greater San Diego Region totaled \$328,953,815 and in California totaled \$366,782,798.

San Diego research institutes also have an affinity for diversity in their workplace. For example, the Sanford-Burnham Institute employs the following Post Doctorate ethnic populations as demonstrated in Figure 8A.

Figure 8A: Sanford-Burnham Institute – Post Doctorate Employees

	Male	Female	Total
African American	0	1	1
Asian	70	38	108
Hispanic	7	8	15
Two or More Races	2	3	5
White	47	36	83
Total	126	86	212

San Diego is home to many collaborative working groups who seek to advance collaboration through the commercialization process by linking private and public entities together to accelerate discoveries. Take for example the William J. von Liebig Center for Entrepreneurism and Technology Advancement at UC San Diego. This program offers services to faculty, researchers and students interested in commercialization of the inventions resulting from their research. Through a combination of business mentoring, pre-venture grants and graduate level education on entrepreneurship, the von Liebig Center helps bridge the gap between the laboratory discovery and the marketplace. To date, the Entrepreneurism Center has granted \$4.6 Million to 82 technology teams and contributed to the creation of 32 startup companies which in turn have raised more than \$150 million in capital and created close to 200 jobs.

SPAWAR is home to an active Technology Transfer Office which seeks opportunities to transfer innovative technologies developed and patented by SPAWAR Systems Center Pacific scientists and engineers to San Diego-based companies through patent license agreements and collaboration with industry and academia through Cooperative Research and Development Agreements (CRADAs). These technology transfer agreements provide economic benefit to the region by facilitating job creation and revenue growth through expansion of technology-based businesses. Since January 2005, two local San Diego start-up companies have been created based solely on SPAWAR Systems Center Pacific technology, creating more than 20 full-time jobs. In 2011 alone,

the two companies combined to bring in more than \$10 million in revenue and investment dollars. SPAWAR Systems Center Pacific has established more than a dozen technical collaborations with San Diego area companies that were formalized through CRADAs.

San Diego is also home to a broad range of established corporations who have established or relocated major R&D departments in the region due to the robust academic and research environment, including Pfizer, Eli Lilly, Life Technologies, Qualcomm, Sony Electronics, Synthetic Genomics, General Atomics, Nokia and Callaway Golf.

Collaborative endeavors have created several industry-leading tech clusters

- Region leads many established tech clusters and several emerging clusters
- Established industries create perfect foundation for new clusters in converged technologies
- Close proximity to competitive and emerging innovations will give examiners direct access to creators and inventive processes

The Southern California region boasts a myriad of industry sectors adding to the available engineering talent and community resources. San Diego is a leader in many established sectors as well as various emerging clusters. The region's wealth of expertise and experience in both established and developing clusters will help the USPTO train the next generation of examiners to fill the demand for patents filed by new and emerging sectors in the future.

To view San Diego industry-cluster and convergence maps, click [here](#).

San Diego is home to half a dozen internationally competitive industry clusters including biotechnology, wireless, software, defense and security, clean technology and sports products. San Diego's biotech industry is the third largest in the United States

and was ranked by the Milliken Institute as the No. 1 biotech-life sciences cluster in terms of innovation and impact on the marketplace. San Diego is home more than 1,700 thriving life sciences companies, and its expertise runs the gamut from drug and biologics discovery, to medical devices, genetic sequencing, synthetic biology, wireless health, and biofuels. Major life science companies that are headquartered in San Diego include Amylin Pharmaceuticals, Arena Pharmaceuticals, Gen-Probe, Genoptix, NuVasive, Pfizer, ResMed, Illumina and and Senomyx. The industry alone produces over 40,000 jobs for the San Diego region. San Diego has an immense asset in its defense community which includes 300 defense and securities companies including General Atomics, General Dynamics, Lockheed Martin, Northrop Grumman and SAIC. With a history of success in its wireless and software community, San Diego is home to more than 1,400 companies in this sector, including the headquarters of communication powerhouses such as Qualcomm and Sony Electronics. San Diego has 822 clean tech companies residing in the region and is a hotbed for innovation in this sector, specifically in solar power, energy storage and advanced biofuels. The San Diego cleantech cluster was named one of the top ten globally in 2010. Overall, San Diego cleantech cluster contributes \$3 billion in direct, indirect and induced impact, \$750 million in combined annual payroll and more 10,000 jobs. San Diego has been ranked first in action and sports manufacturing start-ups and the region is home to approximately 650 action and sports companies including industry leaders such as Nixon, Taylor-Made, and Callaway Golf.

These well-established industries will continue to grow and demand a deeper knowledge by patent examiners to efficiently evaluate new technologies developed by these sectors. San Diego has the established sector expertise to be an asset to the USPTO's examination of patent applications in these competitive markets.

The region's established industries have created a perfect foundation for convergence clusters to emerge and spawn new innovative sectors such as wireless health, genomics, biofuels, and biomimicry.

San Diego is a world leader in wireless health innovation. In 2009, the Gary and Mary West Foundation created the West Wireless Health Institute, the world's first medical research organizations dedicated to advancing health and well-being through the use of wireless technologies. Scripps Health signed on as the founding health care affiliate, and Qualcomm as a founding sponsor. San Diego is home to over 50 wireless health companies and is the world's leader in mobile health. In addition, it has the highest concentration of wireless industry employment in the U.S. and 75,000 miles of underground fiber optic cable, also the most in the nation.

Genomic science is also a thriving emerging cluster in San Diego. The Scripps Translational Science Institute (STSI) aims to replace the status quo of one-size-fits-all medicine with individualized health care based on known genetic factors, utilizing advances in digital technology for real-time health monitoring. In late 2006, San Diego recruited one of the world's premier cardiologists and scientists, Dr. Eric Topol, to become the Chief Academic Officer and Professor of Translational Genomics at STSI. Under his leadership, STSI has created major programs in both research and education training that bridge science with medicine and academia with industry. World-renowned biologist, Dr. Craig Venter, also relocated to San Diego and founded Synthetic Genomics in 2005 – a firm dedicated to using modified microorganisms to produce clean fuels and biochemical. In addition, the J. Craig Venter Institute was founded in 2006 in San Diego which has been pioneering research in synthetic biology and recently culminated 15 years of work by creating the first cell completely controlled by a synthetic genome in 2010. In 1999, the Genomics Institute of Novartis Research Foundation was established in San Diego and is known for developing technologies in cellular genomics and biology to more effectively treat human disease.

Like biotechnology before it, wireless health and genomic sciences promise to not only create a new frontier for economic development but workforce advancement opportunities to foster a highly skilled, highly competitive and diverse workforce for these industries' rapidly emerging and changing needs. This diverse workforce will add to the available engineering and science talent for a San Diego Satellite Office to address the future demand for expertise in these growing clusters.

With over 822 cleantech companies that call San Diego home, the region shows enormous growth, leadership and innovation in this upcoming industry. San Diego's innovation economy has begun to focus on the converging field of research and commercialization in biology and clean technology to create a spawning biofuels community. As of June 2011, San Diego has over 45 biofuels companies residing and growing in the region. Biofuels research and development in the San Diego region constitutes an increasingly robust cluster of economic activity. A January 2012 analysis, conducted by the San Diego Association of Governments' (SANDAG) Economic Bureau, reports that for the algae sector alone, the industry currently provides the region with 466 direct jobs, \$80.9 million in direct economic activity and \$157.1 million in total economic activity annually. According to results from the CA Industrial Biotech Workforce Survey, industrial biotech companies grew 19% between 2009 and 2010. Over the past five years, this unique segment grew 50%.

The San Diego Biofuels Initiative was formed in 2008 to bring together a diverse group of stakeholders to address the emerging opportunities in the biofuels sector. The public-

private partnership includes CleanTECH San Diego, BIOCOM, BIOCOM Institute, San Diego Regional Economic Development Corporation, Imperial Valley EDC, San Diego Center for Algae Biotechnology (SD-CAB), UC San Diego, San Diego State University, San Diego Workforce Partnership and MiraCosta College. The region possesses unique and diverse assets that transcend both the clean tech and biotech sectors to position San Diego for continued success and growth in this field. This active coalition brings together San Diego's regional assets to commercialize and apply new biofuels technology.

The San Diego Center for Algae Biotechnology (SD-CAB) also offers many opportunities to increase knowledge and train San Diego's workforce on this nascent sector. Established in 2008 as a consortium of researchers from The Scripps Research Institute (TSRI), UC San Diego, and Scripps Institution of Oceanography (SIO), SD-CAB collaborated with the private sector to apply lab discoveries to the industrial world through vigorous research and development in biology, chemistry and engineering.

The EDGE Initiative (Educating and Developing Workers for the Green Economy) is another public-private partnership dedicated to educating, training and placing qualified workers in this space to help grow the biofuels/industrial biotechnology industry. The San Diego Biofuels Initiative applied for and won a \$4 million grant from the California Department of Labor to fund the EDGE program. The grant provides free tuition and paid internship opportunities for eligible applicants. Program curriculum has been carefully constructed with input from industry partners to ensure that these sectors' needs are met with highly skilled workers. The first 50 graduates of the EDGE program received their certification on September 7, 2011.

EDGE Training Courses include:

- ***Industrial Biotech Immersion Program:*** This online certificate program uses industry driven curriculum to give individuals the business acumen and soft skills needed to successfully transition into industrial biotech careers.
- ***Biomass Production Training Certificate:*** This certificate, initially run through MiraCosta Collage, provides a foundation in the technologies employed by biotechnology companies engaged in the production of microalgal biomass for biofuels and other applications for biomass production careers.
- ***Biofuels Science Technician Certificate, Tracks - Biological/Biofuels Lab Technician, Microbiological/Crop Management, Biofuels Analytical Chemist:*** This certificate, initially run through UCSD Extension, provides the hands-on technical knowledge and experience in biofuels production, analysis and processing required to excel in a management-level biofuels career, in one of

three areas: analytical chemistry, microbiological/crop management, or biological/biofuels lab techniques.

- ***Advanced Training in Biofuels Production Certificate, Masters of Advanced Studies (anticipated launch date: January 2012)***: Fulfilling the need to continue to understand and improve the science of biofuels, the UCSD-based M.A.S. will prepare advanced degree holders to assume responsibility for important research in the growing biofuels industry by providing technical knowledge and hands-on experience in biofuels production, analysis and processing, as well as basic biotechnology business and entrepreneurial skills.

San Diego's cleantech cluster also thrives in the solar and smart grid sectors. As California's leading solar city with over 212 companies in the region, the State of California awarded San Diego with an Innovation Hub (iHub) designation for solar power. Furthermore, the region's leadership and collaborative efforts lead to \$154 million in Clean Renewable Energy Bonds (CREBs) from the IRS for new solar installations. The total allocations designated to San Diego make up 19% of the total allotment going to public agencies nationwide. In December 2011, Soitec, a France-based solar company, announced their North American headquarters site in San Diego. As a world leader in solar manufacturing, Soitec saw the innovative opportunities and business potential in San Diego.

The region's smart grid sector is led by the Smart City San Diego initiative- a collaborative project combining the resources of the private, public, government, non-profit and academic sectors. The first objective initiative is to deploy a comprehensive electric vehicle charging infrastructure to support the largest roll-out of electric vehicles (EVs) in the nation. San Diego is one of five markets awarded by the U.S. Department of Energy with 2500 charging stations. With 10% of the 20,000 Nissan Leaf EVs ordered nationwide, San Diego is clearly trending towards electric vehicles and the accompanying smart grid technology. The second objective of Smart City San Diego is to increase energy efficiency through residential smart appliances, provided by General Electric (GE). GE will test its suite of smart appliances in a new 114-unit apartment complex that is being built to be the greenest apartment building in the nation. San Diego's culture of innovation brings new technology to the public forefront. The region's smart grid cluster can aid the USTPO in learning about the up-and-coming technologies, and streamline the legal process in getting the technology deployed outside of San Diego to other clean cities in the nation.

San Diego is also a leading region in the emerging field of biomimicry, or design inspired by nature. Biomimicry is a interdisciplinary approach to problem solving in which biologists, engineers, chemists, business leaders, and more combine their

expertise with the knowledge put forth by nature's evolutionarily refined elements to progress the fields of technology, transportation, renewable energy, and beyond. The San Diego Zoo, a globally recognized brand, has partnered with the City of San Diego, the four major local universities and industry organizations to form Biomimicry BRIDGE, a collaborative effort to foster a new paradigm for research, education, innovation and product development by looking to nature for inspiration.

Currently, the University of California of San Diego and San Diego State University conduct active interdisciplinary research and development of bio-inspired products. Point Loma Nazarene University produces The DaVinci Index, a quarterly economic metric for biomimicry tracking scholarly articles, patents, and grant funding. According to a 2010 study by Point Loma Nazarene University, biomimicry could represent \$300 billion annually of U.S. gross domestic product (GDP), \$50 billion in terms of mitigating the depletion of various natural resources and reducing CO₂ pollution, and account for 1.6 million U.S. jobs by 2025. Globally, biomimicry could represent about \$1.0 trillion of GDP in 15 years.

This emerging cluster of biomimicry is a collaborative approach to innovation that will complement and enhance existing sectors such as biotech and clean tech in the near future. San Diego is poised to become the world's leader in this sector.

Firms selling biomimicry-inspired products in the marketplace have frequently seen a doubling of sales annually in the early years. Many of these products can offer customers reduced energy requirements, less waste and enhanced performance while being sold at prices competitive with or even less than those of existing products. This emerging cluster is a new and collaborative approach to innovation that will complement and enhance existing sectors such as biotech and clean tech in the near future. San Diego is poised to become the world's leader in this sector. It is estimated that 1,000 biologists, naturalists and other scientists could form in San Diego over the next 15 years as a biomimicry core to help take solutions in the natural world to commercial application. A San Diego Satellite Office would have direct access to this new wave of innovation, its' patents and the leading minds that drive this new cluster forward in the coming years.

These emerging markets have created a unique community of experts in these new industries and added to the engineering talent available in San Diego. All of these developing industries will continue to gain traction in San Diego and will require a high-level of understanding and expertise by patent examiners if the United States wants to remain competitive in these emerging fields. San Diego is the region to help the USPTO learn more about these industries using the intellectual capital and resources from their backyard.

Advanced research discoveries require a robust IP environment

- Flourishing innovation economy necessitates a strong IP community and environment
- Leading region in number of patents published and granted per quarter against other innovation regions
- Dynamic IP activity provides USPTO expansive recruitment opportunities

Supporting the research synergies that are commonplace in San Diego's innovation sector is an impressive cadre of legal professionals that propel the region's thriving IP environment. San Diego has 824 attorneys and agents registered to practice before the USPTO with only about 30% of those registered being agents. Because San Diego's innovation community explores discoveries in numerous technology frontiers, IP attorneys and agents cover a multitude of complex issues including but not limited to biotechnology and organic chemistry, electrical engineering, communications, mechanical/biomedical engineering, electromechanical devices, computer software, information security, semiconductors, computer networks, multiplex communication and wireless devices.

According to a 2011 *Intellectual Property Today* survey, five of the top eleven patent firms in the United States operate in San Diego (rankings are based on number of utility patents issued in 2010). In March 2011, the San Diego Daily Transcript reported that the top 22 area intellectual property law firms employed 357 IP attorneys, of which, 231 are registered with the USPTO.

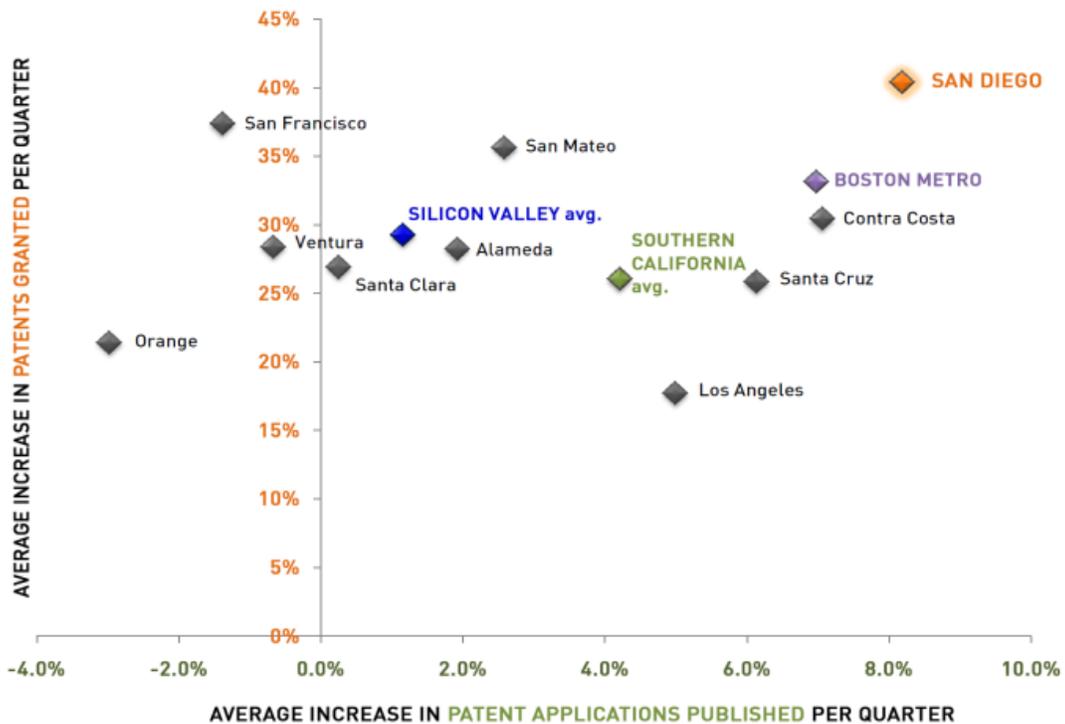
Figure 9A below demonstrates San Diego's recent patent activity on next page.

Figure 9A: San Diego Patent Activity – 2008-2010

Year	Applications Published	Applications Granted
2008	5,672	2,721
2009	5,893	2,841
2010	6,374	3,986

San Diego shows higher growth in the average number of patents published and granted per quarter in comparison to other innovation regions. Over the past two years, the average number of patent applications published per quarter in San Diego increased by more than 8%, and the average number of patents granted per quarter increased substantially by 40%. San Diego showed similar growth year-to-year for patents granted. See Figure 10A below.

Figure 10A: Increase in Regional Patent Activity Per Quarter – 2009 to 2010



San Diego continues to lead the Southern California region when comparing the number of patents published and granted per 100,000 residents (patent density). San Diego also shows higher year-to-year growth in the number of patents published and granted between 2008 and 2010 compared to other innovation regions in the United

States. Over the past three years in San Diego, the number of patents published increased by more than 12% and the number of patents granted jumped by more than 45%. Figures 11A and 11B represent San Diego's patent density while Figures 12A and 12B demonstrate the region's year-to-year patent growth compared to other tech-related cities in the U.S.

Figure 11A: Patent Density Per Quarter – Patent Applications Published

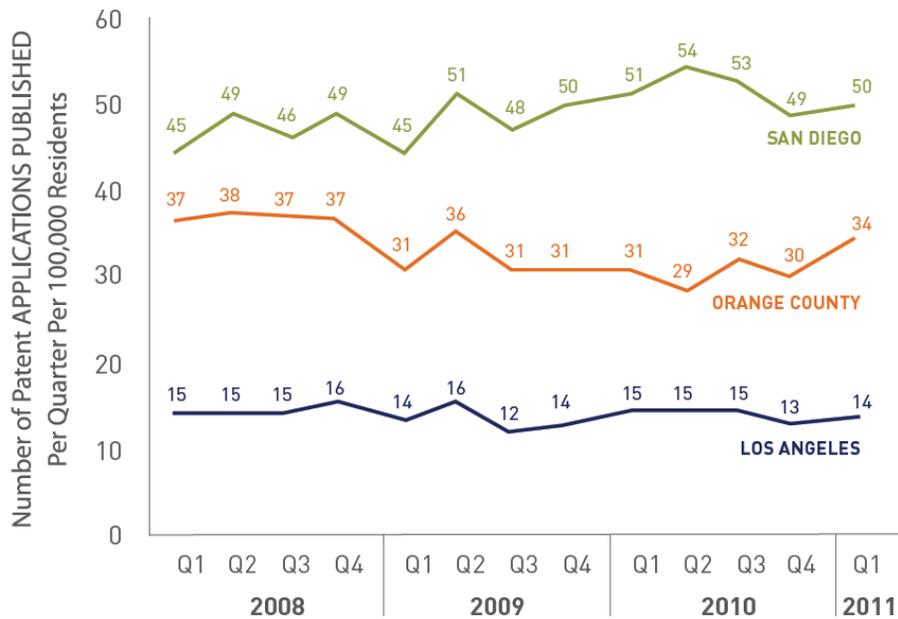


Figure 11B: Patent Density Per Quarter – Patents Granted

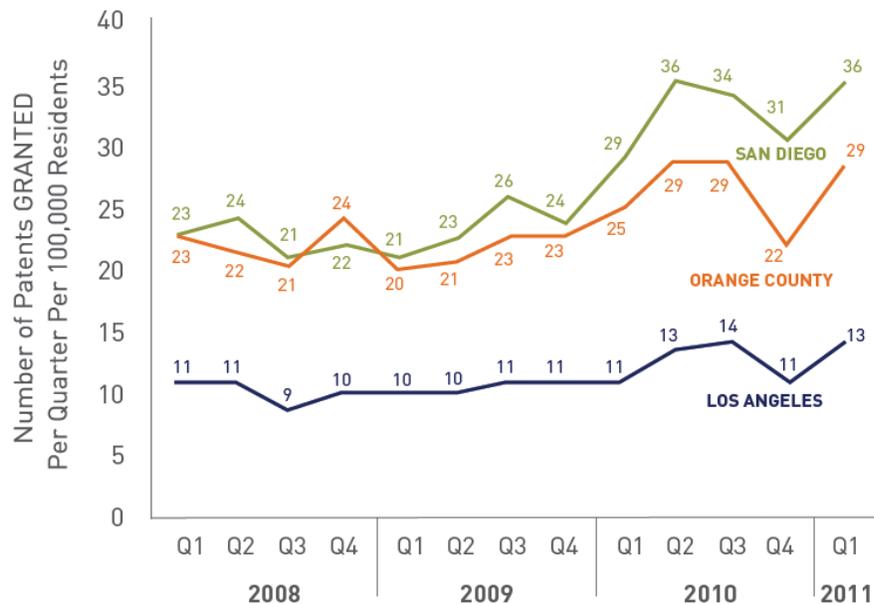


Figure 12A: Year-to-year Patent Growth – Patent Applications Published

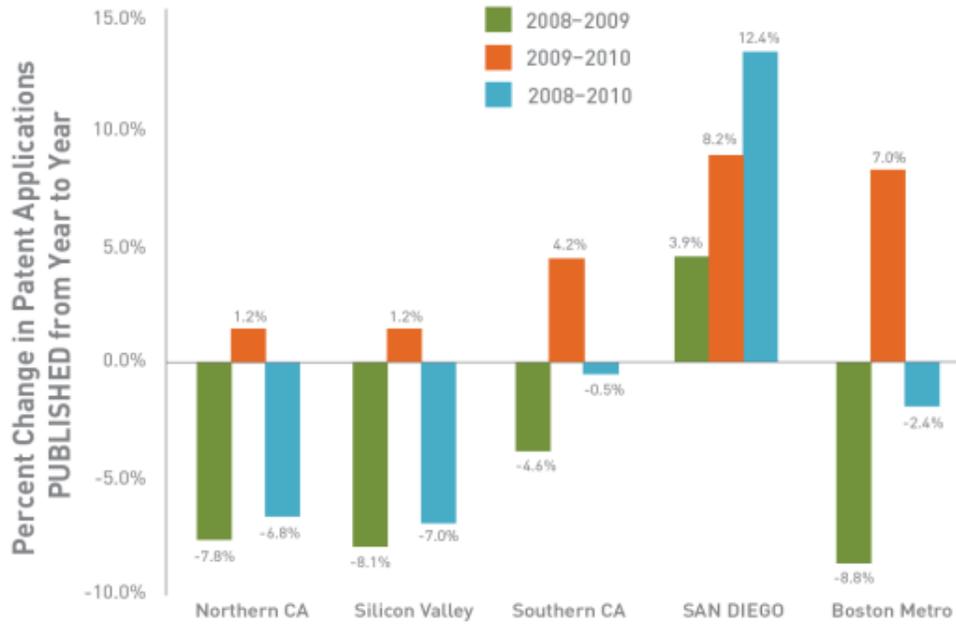


Figure 12B: Year-to-year Patent Growth – Patents Granted



Patents per worker in San Diego far outpace the national average and even a local San Diego Congressman, Representative Darrell Issa, holds 37 patents of his own from his time in the private sector.

The sheer number of patents coming out of San Diego and surrounding areas is a testament to the broad patent applicant community the USPTO could interact with in a San Diego satellite office. However, even more significant is the *quality* of innovation in this region. By and large, the patents originating in the San Diego/Southern California area are not minor commodity patents; instead, they represent the cutting edge in their respective technologies. The top 10 patent areas for San Diego are shown in Figure 13A. In first place is Class 424 (Drug, Bio-Affecting and Body Treating Compositions), followed by Class 455 (Telecommunications), Class 370 (Multiplex Communications), and Class 435 (Chemistry: Molecular Biology and Microbiology). Nine of the top 10 areas relate to life science and high technology.

The following table displays technology classes and counts of utility patents classified in them for the San Diego Metropolitan Area (i.e., San Diego, Carlsbad, and San Marcos). Technology class is determined by the primary classification assigned to a patent.

FIGURE 13A - San Diego Patent Statistics By Technology Area (2006-2010)

Rank	Technology	Total Utility Patents
1	424: Drug, Bio-Affecting and Body Treating Compositions (includes class 514)	926
2	455: Telecommunications	896
3	370: Multiplex Communications	740
4	435: Chemistry: Molecular Biology and Microbiology	695
5	375: Pulse or Digital Communications	540
6	532: Organic Compounds (includes classes 532-570)	379
7	473: Games Using Tangible Projectile	375
8	709: Multicomputer Data Transferring (Electrical Computers and Digital Processing Systems)	193
9	128: Surgery (includes class 600)	181
10	382: Image Analysis	151

A perfect example of the quality and complexity of patents worked on in San Diego is evidence by an announcement from SPAWAR. SPAWAR entered an agreement with a wireless and software product development firm. The novel tech transfer agreement took more than two years to develop because it contained more than 60 patents.

“Yet, the agreement contains the single largest up-front licensing fee ever negotiated by the U.S. Navy and the Department of Defense. The agreement is intended to facilitate the commercialization of an entire portfolio of Navy-developed technologies focused on computer software and hardware, advanced algorithms, artificial intelligence semiconductors, digital imaging, communication protocols, lasers and optics.”

In addition to life sciences and clean energy innovation, one of the strongest San Diego IP sectors is telecommunications. The headquarters of several major telecom companies are in the San Diego/Orange County area. Figure 14A shows that San Diego leads the country in telecommunications patents.

The San Diego Metropolitan Area (i.e., San Diego, Carlsbad, and San Marcos) ranks 1st in the country for the total number of utility patents issued in class 455 (telecommunications) during the period 2006-2010. Technology class is determined by the primary classification assigned to a patent.

Figure 14A: PATENT STATISTICS IN CLASS 455 (TELECOMMUNICATIONS) BY METROPOLITAN AREA (2006-2010)

Rank	Metropolitan Area	Total Utility Patents
1	San Diego, Carlsbad, San Marcos, CA	896
2	San Jose, Sunnyvale, Santa Clara, CA	762
3	New York, N. New Jersey, Long Island, NY-NJ-PA	758
4	Los Angeles, Long Beach, Santa Ana, CA	668
5	Chicago, Joliet, Naperville, IL-IN-WI	617
6	Dallas, Fort Worth, Arlington, TX	466
7	San Francisco, Oakland, Fremont, CA	426
8	Seattle, Tacoma, Bellevue, WA	414
9	Atlanta, Sandy Springs, Marietta, GA	364
10	Boston, Cambridge, Quincy, MA-NH	303
	Southern California Combined	1,564

Much of San Diego's world class research leads to new company formation. San Diego is home to about 6,000 technology companies employing more than 140,000 people. Some of the world's top corporations are found in San Diego's Top 10 patent organizations. However, most of these 6,000 companies are startups, which are typically the most innovative of all companies, and they choose technologies to patent very carefully. Compared to the average patent application, applications coming out of this region are likely to be more innovative, more technically challenging, more carefully selected, and more important.

The culture of collaboration that permeates the San Diego research community facilitates forging into uncharted scientific fields, undergirded by strong IP. These rewarding professional challenges help keep employees on a stable career track. Furthermore, the USPTO would enjoy a tangible advantage in a San Diego satellite office reducing pendency and interacting with the patent community, not just because of the sheer quantity of patent activity that comes out of Southern California, but because the IP to support these discoveries are so complex.

Thriving Innovation Economy

- Culture of collaboration is woven into fabric of San Diego innovation community
- Connections with top professionals and innovators regularly occur through extensive social network
- Interacting with economic aspects of innovation will allow trainers and examiners to see the bigger picture of patent examination process

San Diego has a strong innovation infrastructure and strong culture of collaboration. The coveted and often replicated San Diego innovation economy has proven to be hugely effective in leveraging the region's geographic, research and workforce strengths to support business creation and innovation. This collaborative and robust

innovation economy will help the USPTO increase their outreach activities to better connect patent application filers and innovators with the patent office.

What makes San Diego's innovation community so unique is the interplay and collaboration between the private and public sectors. Universities and research institutes are often seen not only collaborating with each other but also the larger business community as a whole and various government entities. Professional networks like the Armed Forces Communications and Electronics Association, BIOCUM, CleanTECH San Diego, CommNexus San Diego, CONNECT, National Defense Industrial Association, San Diego Chamber of Commerce, San Diego Economic Development Corporation, San Diego Software Industry Council, TechAmerica San Diego and the Wireless-Life Science Alliance provide excellent networking, mentoring and collaboration opportunities throughout the region for people from both the private and public spheres. These groups keep the community close-knit and tuned-in to changes, making it easy to connect with top professionals and innovators in San Diego. A local patent office would have direct access to this available talent pool and would benefit from our supportive business climate. These resources would help local examiners to better understand the innovation ecosystem and improve their ability to examine and approve quality patents for next generation technologies.

Descriptions of San Diego's professional organization can be found [here](#) and a list of only a handful of events that were hosted in San Diego in 2011 can be found [here](#). Many of the events in San Diego are both educational and have a networking component to them. The model of events in San Diego could be easily assimilated into the USPTO Patent Examiner Technical Training Program and could help extend that program's efforts by adding a networking component to them in which examiners would have an opportunity to mingle with the presenters or possibly other audience members if the event were open to the public. In addition, this active event and program pipeline is beneficial for many Southern California residents who chose to work from home. As evidenced by just the handful of events listed above, on any given day, there are various educational and networking events around San Diego. A patent examiner who has chosen to participate in the USPTO Telework program, for instance, would find San Diego's active events pipeline an asset in keeping in touch with the patent community while still enjoying a remote-work atmosphere.

San Diego also boasts an active venture capital and angel community which contribute to the innovation economy as a whole. The venture community in San Diego is sound and active in the IP space and would be another valuable asset for a local patent office to use as a resource for staying "in-the-know" about current and up-and-coming technologies in various fields as they offer another perspective on IP and

innovation as a whole. Descriptions of San Diego's venture capital organizations can be found [here](#) and angel organizations can be found [here](#).

San Diego would not be a hub of innovation if not for the presence and participation of various accelerators and incubators in the region. San Diego's incubators and accelerators add yet another resource and a unique perspective to the region's innovation economy and IP efforts. Many incubator and accelerator companies attend various events throughout the region and are often never shy to serve as case studies for the community to help them but also so they community can learn from their experience. A list of these incubators/accelerators can be found [here](#).

All of these entities help existing businesses grow, as well as inspire and fund innovation in San Diego. The USPTO could use these same resources to help attract, train and retain talented staff and increase the presence and influence of a local patent office in San Diego while providing local employees with a supportive and nurturing community to increase their customer interface with various players in the innovation community beyond just start-up companies.

The collaborations and available resources do not stop there. San Diego is an active partner in many innovation economies in California, across the country, and around the world. In 2010, San Diego Imperial Valley and Inland Southern California were designated an Innovation Hub (iHub) by the California Governor's Office of Business and Economic Development, in recognition of the regions' innovation infrastructure and strong culture of collaboration. In this specific role, San Diego collaborates with 10 other regions across California to identify ways to improve the state's national and global competitiveness by stimulating partnerships, economic development, and job creation around specific research clusters throughout each region. As an active member of the iHub initiative, San Diego would offer a USPTO satellite office a direct contact into the iHub initiative as it begins to develop real business friendly tools to take California into the next stage of economic development.

San Diego's local government is also an asset to the region's vibrant innovation economy and a key player in the region's culture of collaboration. The Mayor's Office of Economic Growth Services (EGS) assists the Mayor and the City in implementing economic development initiatives in order to create and retain jobs in San Diego. EGS consists of two focused work units: the Business Expansion, Attraction and Retention (BEAR) Team and the Government Incentives (GI) Team. These two teams work directly with businesses and City departments to create a business-friendly environment that ensures a stable economy. Economic growth, energy independence and talent enhancement are accomplished by attracting, growing and retaining a high-

level workforce and new companies while and making San Diego competitive in emerging markets.

EGS can provide immediate value to a San Diego Satellite Office by helping the USPTO understand and analyze the business factors and potentials of a local patent office in the region. The Mayor's Office of Economic Growth Services has committed to assigning its Business Development Manager, Russ Gibbon, to assist the USPTO with any establishment issues that might arise during the start-up process and help to explore low-cost solutions to opening a San Diego office. Mr. Gibbon has over 16 years of experience providing this service to San Diego businesses. Moreover, the EGS team can be a consistent resource for a San Diego Satellite Office and can help to expand and improve the office even after the initial start-up phase.

High quality of life can increase productivity

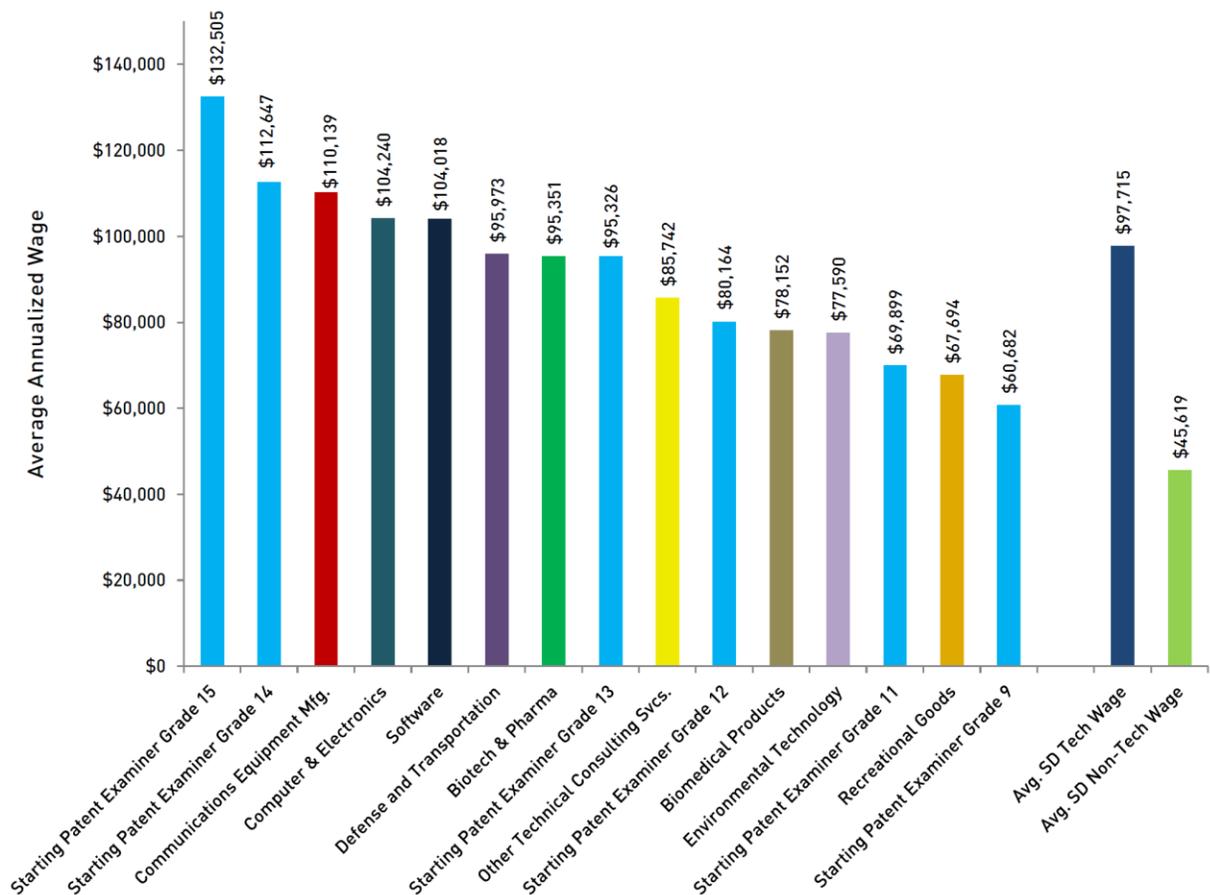
- From "perfect" weather, to arts and culture, to the coastline, San Diegans enjoy a high quality of life
- Wonderful community support and respect for public servants
- Region's various quality of life benefits provides USPTO with remarkable recruitment and retention tools

With 70 miles of coastline, 33 beaches and an average daily temperature of 70.5 degrees Fahrenheit year-round, San Diego is a safe and beautiful region, rich in culture and entertainment and a rewarding place to live and work. San Diegans enjoy a wide range of lifestyle choices, from urban chic to rural tranquility. There are few regions within the United States that offer as many residential options within a reasonable drive from major employment centers.

San Diego's quality of life is truly unmatched by other regions in the United States. The region's desirable lifestyle offers many unique advantages to its residents and will be a beneficial recruitment and retention tool for the USPTO.

Standard of Living

The average annual San Diego wage for a worker not in the tech sector is \$45,619. However in the tech sector the average annual wage is twice that amount over \$97,000. Although a starting patent examiner might start on the lower scale of average tech sector wages for various industries, over time, a patent examiner can equal or exceed the average tech sector wage in San Diego. As the chart below shows, an examiner in grades 11-13 can make competitive wages as compared to others in the tech sector. However, productive examiners that quickly move up in pay bands in their grades, can attain extremely competitive salaries compared to others in the San Diego tech sector.



These competitive wage opportunities could play a critical role in examiner retention since the examiner might be less prone to “revolving door” offers. An examiner who stays with a San Diego Satellite Office over the long-term could find a comfortable life style against others in the tech sector.

Another related factor to the competitive wages an examiner could make, is the relatively small number of patent agents that are registered in San Diego compared to patent attorneys. As mentioned previously in discussing San Diego's IP community, of the pool of registered patent agents and attorneys, agents only make up about 30% of those registered. Thus, the data suggests that San Diego's IP law firms have a modest propensity to fill their ranks with agents, opting instead to hire patent attorneys. The competitive wages and culture of San Diego IP law firms to hire attorneys instead of agents could both play critical factors in helping the USPTO retain examiners long-term which will directly improve productivity and reduce pendency.

Climate

United States Weather Bureau describes San Diego's weather as the closest thing to perfect in America. Holiday magazine described San Diego as the "only area in the United States with perfect weather." Pleasant Weather Rating Service Poll voted San Diego as the best year-round weather in the nation, and the second best in the world. With an average temperature of 70.5 degrees Fahrenheit year-round, San Diego's Mediterranean climate is unmatched by any other region in the United States.

Housing

From coastlines to inland valleys, San Diego's unique topography provides a landscape that has something for everyone when it comes to housing options. The metropolitan housing market has opportunities for households of every size and income level, including affordable apartments, first-time-buyer condominiums, suburban single family homes and luxury oceanfront or rural estates.

Transportation/Commute



San Diego has a well-developed and relatively uncongested highway system. Four major interstate freeways and eight state highways serve the City. The average daily round-trip commute ranks No. 5 compared to the 20 largest metropolitan areas in the nation. The mean travel time to work in San Diego is 20 minutes.

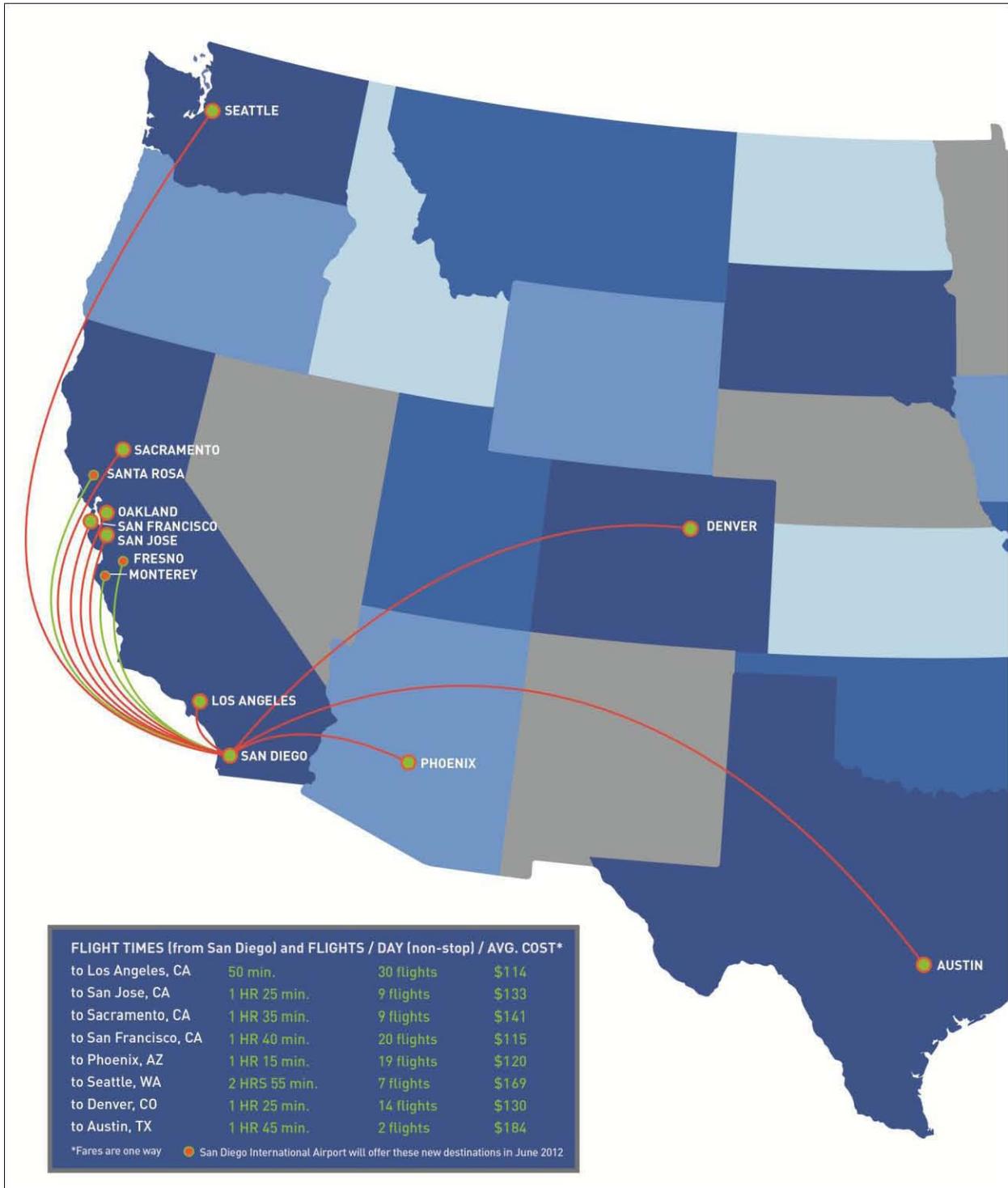
In addition, San Diego offers various public transportation options for its residents. The Metropolitan Transit System operates 29 bus routes covering 635 miles and the San

Diego Trolley system operates over 53.5 miles on three routes with 53 stations. The trolley connects the City with East San Diego County, San Diego State University, Qualcomm Stadium, Old Town, Downtown and the Mexican Border. Passenger rail service is provided by Amtrak, Metrolink and Coaster commuter trains. Amtrak operates 10 trains to San Diego. The Coaster operates during peak hours connecting San Diego County coastal cities. More than 20 trains run on weekdays, with service on Saturdays. In March 2008, North County Transit District launched its newest addition, the east-west Sprinter light-rail train system between Oceanside, Vista, San Marcos and Escondido. The 22-mile long rail system runs east-west serving 15 stations.



The California High Speed Rail is planned to pass through San Diego and a trip from San Diego to Los Angeles would be approximately 80 minutes.

Airport



The airport is conveniently located on the coast only 10 minutes from the heart of downtown. Should a San Diego location be selected, travelers needing to do business with the USPTO would have a convenient and timely commute to transact their business and return to the airport for a later flight. Such a time benefit is simply not available for airports in other competitive California locations or other cities in the western U.S. If not going downtown, travel to most parts of the research community don't exceed 25 minutes. The patent applicant community in California, the western U.S., the Pacific Rim or South and Central America will benefit from San Diego's convenient travel options to and from the airport.

The San Diego Airport also provides multiple flight options to travelers. More than 600 flights arrive and depart from San Diego International Airport each day carrying an estimated 50,000 passengers. The airport is centrally located near Downtown San Diego and accommodates daily flights to 158 cities. To accommodate the ever increasing demand, the airport is undertaking improvements including the addition of 10 new gates together with improved passenger access to the terminals.

San Diego Airport's Commuter Terminal also offers travelers direct access to Los Angeles International Airport, the fifth busiest airport in the world. There are over 25 daily flights from this convenient terminal with quick check-in and short security lines.

Commuter flights also depart from McClellan Palomar Airport in North San Diego County and Tijuana International Airport, just south of the international border. In addition, the San Diego airport, which offers approximately 230 flights per day, is conveniently located approximately an hour and a half from John Wayne Airport in Orange County and Long Beach Airport which offer an additional 302 flights per day.

Of specific importance to USPTO officials and examiners, the San Diego International Airport offers 61 daily direct flights to various tech-related western cities and other USPTO locations:

USPTO Office Airports

- 3 direct flights from San Diego to Dulles Airport per day
- 3 direct flights from San Diego to Detroit Airport per day

Schools

Fourteen of Newsweek magazine's top 500 public high schools are located in San Diego. Almost 100 private K-12 schools operate in the county, both religious and non-sectarian.

San Diego has several award winning school districts including Coronado, Del Mar and Poway and 75 public charter schools throughout San Diego County. An example of one of our thriving charter school initiatives is High Tech High which began in 2000 by a coalition of San Diego business leaders and educators as a single charter high school specializing in math, science, and engineering. It has since evolved into an integrated network of nine schools spanning grades K-12 (five high schools, three middle schools, and one elementary school) and houses the nation's first comprehensive teacher masters certification program in Teacher Leadership and School Leadership known as the Graduate School of Education (GSE).

Perhaps one of the most telling examples of San Diego's commitment to education can be found in The Preuss School. The Preuss School began when a group of faculty from UC San Diego began planning for the best way to increase the number of students in the university who come from low income or under-represented groups. In 1999, the Preuss School opened its doors to 150 students in grades 6-8. Today, Preuss has over 800 students enrolled in grades 6-12 and maintains a culturally diverse student population with 59% Hispanic, 12% African American, 23% Asian/Indo-Chinese and 6% Caucasian. Preuss is housed in a state-of-the-art facility which is funded entirely by community donors and logs 74,669 instructional minutes per year compared to the State requirement of 64,800.

As mentioned several times previously, San Diego's education community has taken up the mantle of educating young innovators in the STEM fields with over 40 different programs offered throughout the community.

Health Care

The health care system in San Diego County is among the best in the nation. There are 26 accredited hospitals with more than 6,600 beds available. Six hospitals in the region offer AMA residency programs. According to a report by Northwestern National Life, San Diego ranked in the top three cities for quality and costs of healthcare. The UC San Diego School of Medicine is one of the top research hospitals in

the country and Rady Children's Hospital is one of the top-ranked children's hospitals in the nation.

Arts & Culture

Dozens of museums abound in San Diego focusing on history, technology, culture and art. Annual music and stage festivals in the City include the San Diego Symphony, San Diego Opera, La Jolla Playhouse, Old Globe Theatre, Mainly Mozart Festival, San Diego Street Scene, Adams Avenue Music and Arts Festival and Adams Avenue Roots Festival. Our theatres regularly create Broadway hits such as Jersey Boys, Memphis, The Who's Tommy and seven others in the past 10 years. The San Diego Symphony benefits from a generous endowment and is one of the nation's top 20 symphonies. There are nearly 200 movie screens in the city featuring everything from blockbuster motion pictures and other current releases to foreign, independent and cult films and major film festivals.

Public Parks and Sports Activities

The City of San Diego alone has 34,260 acres of developed and undeveloped open space, including three regional parks, 190 community and neighborhood parks, seven open-space parks, 26 shoreline parks and 25 miles of ocean and bay beaches. Balboa Park is a national treasure, housing museums, theatres and the San Diego Zoo. With its year-round mild weather and multitude of beaches and parks, San Diego is a sports haven. It should be no surprise that outdoor sports are extremely popular for participants of all ages. Our local municipal golf course, Torrey Pines, hosted the 2008 U.S. Open Golf Tournament and is available to all residents. It is one of 90 courses in San Diego that are open all year round. Spectator sports are major draws including NFL team San Diego Chargers, and the MLB Padres baseball club in beautiful Petco Park.

San Diego provides cost-effective options for establishment of a satellite office as well as a community ready to embrace the USPTO

- Pro-active facility solutions can reduce real estate and operating costs while fostering a positive work environment
- Green technology and sustainable infrastructure further increase cost-saving opportunities

- Various affordable real-estate and office options will facilitate successful satellite expansion

A successful facilities strategy can provide significant real estate and operations benefits to a modern day office environment. A successful strategy can inspire human potential by promoting an innovative culture and encouraging a collaborative working environment to attract and retain top talent, while decreasing costs and incorporating sustainability.

Numerous reasonably priced and flexible choices for everything from office space to public transportation allows the USPTO to explore various options to best accommodate strategic needs and negotiated requirements.

Downtown San Diego gives the USPTO at least four options for Class A office space with large square footage areas which are all fully equipped for modern IT and telecom needs. Each of them also house at least one federal agency tenant.

- Columbia Center is LEED certified and recently named California's Most Intelligent Building. The core of the building is equipped with a vital building infrastructure called the Building Optical Network (BON). More information on this building can be found [here](#).
- Golden Eagle Plaza at 525 B Street is both LEED and Energy Star certified. More information on this building can be found [here](#).
- 550 Corporate Center is Energy Star approved and conveniently located next to public transportation options. More information on this building can be found [here](#).
- 701 B Street is also energy efficient and provides quick and easy access to highways. More information on this building can be found [here](#).

IT Solutions

Knowing the importance of USPTO's data, and IT needs, San Diego's top data, IT and telecom organizations have pledged to work with the USPTO to trouble shoot potential problems in standing up a San Diego Satellite Office. The San Diego Super Computer Center and Calit2 are willing to provide their expertise in IT, building large scale collaborative storage and computer farms, and software architecture for e-collaborations to ensure the USPTO has the IT capabilities it needs to reduce pendency and promote telework.

Once a location is selected, there are several opportunities to maximize the USPTO's return on real estate investments as well as short-term and long-term investment ideas that will decrease the overall operational costs of a San Diego Satellite Office.

The strategy outlined below employs three pro-active facility solutions that we anticipate will, if applied together, generate a 5% reduction in real estate and operating costs for the USPTO per year from their traditional office model.

Smart Growth Model

A vital piece of a successful, modern-day office environment is an organization's "Smart Growth Model" which anticipates growth and reduces the cost of change in a workplace.

San Diego's most successful growth model employs a movable and modular construction of office space that lends itself to grow without destruction. Using the Smart Growth Model, an organization is able to lower the costs of change or growth without destroying assets because the workspace is built to be flexible. This would be a smart investment in the original infrastructure of a San Diego Satellite Office that would generate tremendous savings for the USPTO in the long run.

Research has shown a dramatic shift in the physical make-up of the innovative office. In the past, traditional white-collar office space was configured as 70% individual space and 30% collaborative space. Individual space has very high up-front cost related to construction and tenant improvements. Individual space is also very expensive to change or modify in the out-years as the needs of the office change based on industry drivers. However, today's most effective offices have a much greater mix of collaborative, conversational and dynamic "shared space". The modern office simply works better as it can accommodate change much more effectively. Therefore it is

possible to reduce overall up-front construction costs by up to 20% by developing an office environment that is 50% individual space and 50% collaborative space.

Lower Long Term Operating Costs

San Diego offers many unique opportunities for an organization to decrease long-term operating costs while incorporating a high degree of sustainability.

Due to San Diego's warm and dependable weather patterns, organizations in town are able to utilize square footage outside of the indoor office space. For instance, San Diego companies are able to use outdoor patios for lunch rooms or additional meeting space.

In other words, instead of creating an internal employee lunch room that must be 1,000 square feet and consumes all

indoor space, San Diego companies can create a lunch room that is 300 square feet inside and 700 square feet outside – useable 350 days a year. This allows for local organizations to reduce their overall rent expense and more effectively utilize every square foot of interior space they rent. San Diego's amiable weather patterns also allow the region to use the sun to decrease energy costs for local businesses. Access to 350 days to South facing solar energy is quite unique to San Diego. Installing solar panels has become a regular practice in modern-day facility construction in San Diego. On average, an organization in San Diego that incorporates solar panels into their facilities plan, saves 70% of their operational energy expense per year. San Diego companies in town have the ability to make nominal investments in sustainable infrastructure that have long-term savings because of the region's dependable weather.

A San Diego business that makes maximum use of the readily available solar asset will spend on average 40-70% less on energy than the national average. As a region focused on energy savings, we spend less on daily overhead costs such as heat/air conditioning and often times spend much less on lighting as a result of our focus on the use of L.E.D. lighting solutions. It is not uncommon in San Diego to develop interiors with the air-conditioning underneath the floor (inside an under-floor-air-system). This method will always be a more efficient means of bringing cool air from the floor – nearest the actual people – than to try to blow cold air from the hot ceiling in the hopes that it will eventually get to the employees below. The concrete under the floor is cooler than the ceiling and it takes much less energy to cool the air under the floor. An under-floor mechanical system reduces up-front equipment expense as well as reduces operational costs. It is not uncommon to see a 35% reduction in energy costs related to HVAC.

Multi-tasking of space in a modern office is another big factor to consider and often a huge contributor to lowering the overall cost of a working environment over time. Multi-tasking of space builds a facilities infrastructure that leaves no empty space and often times allows for each space to do more than one thing. For example, Meeting Rooms are often singular in nature and specifically dedicated. They are also normally underutilized since they serve a single primary function. In San Diego, we have a proclivity for allowing multiple areas of the building to serve multiple functions through the use of roll-up walls that can be stored in the ceiling and be brought down to divide a large room into 2, 3 or 4 smaller Meeting Rooms or individual offices as-needed. Creating *multi*-use open areas that can be converted into private or specific use individual spaces with the push of a button can create an interior that is more responsive to the needs of the office user.

Efficient use of office space means an increase in productivity and a decrease in wasted space and, therefore, a decrease in wasted real estate dollars.

Collaborative Working Environment

Perhaps the most important piece of a modern-day office is the ability to create an open and interactive office space. While we understand security is of the utmost importance to the USPTO, a collaborative working environment can still be incorporated in a way that allows local examiners to access one another and allow for the vital exchange of ideas without breaking security measures. Incorporating conference space and modular meeting rooms in addition to private offices creates an exciting and dynamic workspace that encourages a healthy working environment.

San Diego would be an ideal pilot for this high-performance model because of our unique history of collaboration. As mentioned before in this proposal, San Diego's business community is defined by our unique culture of collaboration which encourages partnerships and the efficient exchange of expertise amongst different players in the region. In this model San Diego leverages its collective assets across many sectors to work together to increase our innovative capacity and advance the region's economy.

This model would also support an affluent USPTO Telework Program. San Diego is no stranger to "at-home" offices. Individuals that chose to work from home are at no greater disadvantage to stay connected to the San Diego business community because it is an accepted way of doing business in the region. Employers in San Diego appreciate the benefits of developing a smaller office space with less private offices and open conference rooms that allow for virtual employees to meet with clients or colleagues in

order to stay connected to the local business community without requiring their physical presence in the office. San Diego also makes use of the concept of “modular construction” which creates a more environmentally sustainable and flexible interior that reduces landfill contribution and is highly responsive to future changes in the office layout, otherwise known as “future-proofing.” To be collaborative is to accommodate substantial change. Therefore, the ability for the physical work environment to effortlessly accept market-driven change becomes tantamount.

We believe this collaborative model, if applied to the physical office space of a local patent office, would help to decrease patent backlog and create a modern-day office environment that would help attract and retain top talent, encourage the growth of the USPTO Telework Program, and increase the productivity of examiners.

In addition, San Diego offers many competitive options for office space in the region, including affordable and available Class A Office Space.

Comparison of Central Business District office space rates reveal that San Diego is competitive with, or below, other western U.S. cities, which will save taxpayer dollars.

Economic Impact

With unemployment rates hovering at 9.2% and over 145,000 San Diegans unemployed, a San Diego Satellite Office would obviously provide an economic boost. Estimates based on Department of Labor data suggest that the jobs multiplier might be more a 2:1 ratio for obvious jobs. Those estimates do not take into account the unique nature of a USPTO office and the level of professional transactions that occur.

Conclusion

San Diego has presented a strong, compelling, and very balanced business case to the United States Patent and Trademark Office (USPTO) to be its next regional satellite office. With excellence, depth, breadth, and diversity, we fulfill all the primary goals and requirements of the USPTO. Together we can achieve the human capital and operational goals of the next USPTO Satellite Office. Establishing a San Diego USPTO Satellite Office will build a mutually beneficial relationship between the USPTO's east coast headquarters and the far western region of the U.S., helping to bridge the gap between west coast innovators and the patent examination process. We appreciate and

take seriously the long-term commitment from USPTO that we are proposing and are looking forward to being quick and agile in our interactions, strong in our relationship with USPTO, and will be of service from day one over the many decades to come. Great minds and highly creative talents have long come from all over the world to call San Diego home. San Diego stands united and ready to welcome the U.S. Patent and Trademark Office into our community of innovation through collaboration.