January 27, 2012

Azam Khan
Deputy Chief of Staff
United States Patent and Trademark Office
Mail Stop: Office of Under Secretary and Director
P.O. Box 1450
Alexandria, Virginia 22313-1450

Via email: satelliteoffices@uspto.gov

Re: “Request for Comments on Additional USPTO Satellite Offices for the Nationwide Workforce Program” Notice to Public
Federal Register, Vol. 76, No. 229 (Tuesday, November 29, 2011)

Dear Mr. Khan:

The organizations listed below from the Dallas legal, educational, economic and technology communities jointly submit the following comments and information in support of Dallas, Texas, as a location for one of the USPTO satellite offices to be established under Section 23 of the Leahy-Smith America Invents Act. The following information explains why the Dallas-Fort Worth-Arlington Metropolitan Statistical Area (“DFW”) is an ideal location for a satellite Patent Office.

Based on the five USPTO criteria enumerated in the Federal Register notice of November 29, 2011, DFW offers an ideal location for a satellite Patent Office. Below, we first briefly address the five criteria and then provide more detailed information.

(1) Outreach. According to 2010 USPTO data, more utility patents were filed by Texas inventors than by inventors from any state other than California and, further, many institutional patent owners are located here. Moreover, DFW’s central location in the United States and superior transportation and communications infrastructure make DFW an ideal location to support USPTO outreach activities to inventors and the public throughout the South, South Plains and Southwest regions.

(2) Examiner Retention. DFW is now the fourth largest metropolitan statistical area (MSA) in the country, owing in part to a high quality of life and a cost of living below the national average. For these reasons, DFW has proven to be attractive to a young, well-educated workforce in the science, telecommunications, engineering and technology industries.

(3) Recruitment of Examiners. DFW is already home to a large population of highly-qualified engineers and scientists who have the potential to be skilled Patent Examiners. Moreover, DFW has a proven track record for attracting engineering and scientific graduates from many universities in DFW and throughout Texas that offer science and engineering degrees. In fact, DFW has nearly as many employees in high-tech industries as Austin and Houston combined.

(4) Decreasing Backlog. DFW has abundant commercial office space available for lease at rates competitive with MSAs of comparable size. Further, the ease of travel between Alexandria and DFW will facilitate smooth training, transitioning and supervision of a new satellite Patent Office. As such, a satellite office could be established and staffed in DFW in relatively short order, allowing for the backlog of applications awaiting examination to be reduced.

(5) Improving Examination Quality. With a number of highly-regarded engineering and science university programs within Texas and neighboring states, as well the deep pool of talented practicing engineers and scientists in DFW, the USPTO will have no trouble
finding capable and experienced candidates in a range of arts who can have an immediate impact on improving examination quality. Moreover, reducing the workload of existing Patent Examiners will also have a positive effect on the quality of examination throughout the USPTO network.

The following detailed information bears out DFW’s suitability to meet the USPTO’s five criteria, and the appended “DFW by the Numbers” exhibit lists salient facts.

ABOUT TEXAS

According to USPTO data, Texas inventors were granted 7,541 utility patents in 2010 – the second-highest state ranking behind California. Further, Texas’ three largest metropolitan statistical areas (MSAs) – Austin/Round Rock, Dallas/Fort Worth, and Houston – are ranked as the 10th-, 12th- and 13th-highest ranking MSAs in utility patent origin, respectively.

Texas is a natural fit for a satellite Patent Office location. It is home to some of the most innovative companies of the last century. Texas is the home of corporate headquarters and significant operational divisions for such industry leaders as IBM, ExxonMobil, Texas Instruments, Halliburton Energy, AT&T, Hewlett-Packard, the University of Texas, and scores of others. Further, some of the nation’s finest science, computing and engineering students matriculate in universities in Texas and go on to live and work in such tech centers as Dallas/Fort Worth, Austin and Houston.

In addition to a large tech-based workforce, Texas has a robust and growing economy that has continued to attract skilled professionals during the recent economic downturn. The lack of a state income tax, a low cost of living and a comparatively stable real estate market draw both businesses and individuals to Texas. According to data from the 2010 U.S. census, only one of Texas’ 25 MSAs – the small northern town of Wichita Falls at -0.14% – experienced negative population growth in the first decade of the century. All other Texas MSAs experienced significant population growth, many well in excess of natural increase.

Finally, Texas is a geographically logical home for a satellite Patent Office. Centrally situated in the United States, Texas is readily accessible to companies and individual inventors throughout the South, Southwest and Plains States. Texas is home to major airline hubs like Dallas Fort-Worth International Airport and Houston George Bush Intercontinental Airport and is at the crossroads of a number of major interstate highways, making road travel simple. Texas’ location is also complementary to the existing Patent Offices in Alexandria and Detroit, as well as the contemplated satellite Patent Office in Northern California.

ABOUT DALLAS

Year after year, DFW is recognized as a vibrant, growing metropolitan area that is able to attract and retain skilled professionals and their families with a combination of:

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• Abundant job opportunities
• Cost of living below the national average
• Convenience of geographic location and transportation infrastructure
• Myriad entertainment, educational and cultural activities
• High quality education
• Excellent healthcare

As such, DFW is more than able to satisfy the USPTO’s stated goals of recruitment and retention of Patent Examiners in establishing a satellite office.

Overall Demographics

At a population of nearly 6.4 million, **DFW is the fourth-largest MSA in the United States.** Moreover, a comparison of DFW and its closest-ranked MSAs shows that DFW continues to grow at a rate that exceeds MSAs of similar size, such as Chicago (population: 9.5 million) and Philadelphia (population: 6 million).4

These statistics demonstrate DFW’s ability to attract new residents, as well as retain the existing ones.

Overall Workforce Statistics

Demographically, DFW is home to a comparatively young, well-educated work force. The median age of the DFW work force is 33.3 years, and 34.6% of the adult work force hold management or professional positions. Over 30% of the work force over the age of 25 have a bachelor’s or advanced degree, and more than 50% have completed some college.5

DFW is home to twenty of Fortune magazine’s 2011 Fortune 500 companies, including ExxonMobil Corporation (#2), AT&T (#12) and AMR (#118).6

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5 Dallas Economic Development Guide, Demographic Metro to Metro Comparisons, Dallas Regional Chamber (2011) at p. 40 (citing U.S. Census Bureau (2010); American Community Survey (2008)).

The median household income in DFW is $56,377, with approximately 70% of households earning more than $35,000 per year.\(^7\)

**Concentration of Engineers**

As a technology center, DFW is a natural locus for engineering graduates and practicing engineers. According to the U.S. Bureau of Labor Statistics, DFW is home to more than 38,000 practicing engineers with an annual mean salary of $91,892. Further, DFW exceeds the national average in a number of important specialties.\(^8\)

DFW also has branches of many major engineering professional societies – including ASCE, IEEE, and SPE – that work to encourage students to seek degrees in engineering, recruit recent graduates to the DFW area and retain existing working engineers. These organizations award individual scholarships, contribute to local engineering schools, provide professional enrichment programs and create networking opportunities that help attract and keep engineers and engineering students in the DFW area.\(^9\)

**University Resources**

DFW is home to no fewer than seven (7) fully accredited 4-year universities that have substantial science, computing or engineering programs. In addition, the renowned research facilities, staff and graduate students of UT Southwestern Medical Center are located in DFW. Cumulatively, these DFW institutions enrolled thousands of undergraduate and graduate students in science, computing and engineering programs during the 2009-2010 school year.

In addition to local universities, DFW attracts science, computing and engineering students from a number of respected universities throughout Texas and the surrounding region. Graduates from renowned institutions throughout the US and worldwide also come to DFW to live and work near some of the finest companies in the science, computing and engineering fields.

Proximity to a number of local and regional institutions and the presence of abundant high-tech firms are only two reasons that DFW has been able to attract and retain such a large pool of skilled science, computing and engineering graduates.

**Employers in High-Tech Fields**

DFW is home to dozens of leading technology companies that have kept the high-tech community in DFW thriving for decades. Companies in the telecommunications, electronics, medical, petrochemical and aerospace fields with substantial operations or headquarters in DFW include:

<table>
<thead>
<tr>
<th>Alcatel-Lucent</th>
<th>Alcon Laboratories Inc.</th>
<th>AMR Corp.</th>
</tr>
</thead>
<tbody>
<tr>
<td>AT&amp;T Inc.</td>
<td>Atmos Energy Corp.</td>
<td>Bell Helicopter Textron</td>
</tr>
<tr>
<td>Celanese Corp</td>
<td>Commercial Metals Co.</td>
<td>Dresser</td>
</tr>
</tbody>
</table>

\(^7\) Dallas Economic Development Guide, *Demographics*, Dallas Regional Chamber (2011) at p. 38 (citing U.S. Census Bureau (2010)).


\(^9\) For example, see American Society of Civil Engineering, Dallas Branch (http://www.dallasasce.org); Institute of Electrical and Electronics Engineers, Dallas Section (http://sites.ieee.org/dallas); Society of Petroleum Engineers, Dallas Section (http://www.spedallas.org).
Another factor attracting companies and young professionals to DFW is the ease of transportation from other major US and world destinations. Dallas-Fort Worth International Airport is the home of American Airlines and is among the busiest airports in the world, serving more than 50 million travelers each year. DFW International Airport provides direct, non-stop service to 191 destinations, allowing companies, residents and visitors to conveniently travel to and from DFW from almost anywhere.\(^{10}\) Flights to and from DFW International Airport are rarely subject to inclement weather days, as DFW experiences only about 80 days of precipitation per year, less than 2 of which are attributable to snow.\(^{11}\)

DFW is also home to Dallas Love Field, which provides a full schedule of daily service to US domestic destinations. The home of Dallas-based Southwest Airlines, Love Field is most frequently used by travelers seeking reasonably-priced commuter service to and from regional destinations such as Houston, Austin, New Orleans, Albuquerque, and Oklahoma City. In 2014, changes in federal aviation law will expand Love Field to non-stop nationwide service.\(^{12}\)

In addition to air travel, DFW is well situated for road travel throughout Texas and nationwide. Interstate Highway 35 – the major north-south artery through the plains states – connects Minneapolis, Des Moines, Kansas City, Oklahoma City and Austin to DFW. Intersecting with Interstate Highway 35 in DFW is Interstate Highway 20 – running east toward Atlanta and merging with Interstate Highway 10 to reach Los Angeles in the west. By car, DFW is a mere two and a half hours from Austin or Oklahoma City, four hours from Houston or Little Rock, or seven hours from New Orleans.

Visitors to DFW can choose from myriad hotel and extended-stay options at any price point, arriving and departing with ease from DFW International Airport, Dallas Love Field or by ground transportation. As such, DFW’s central location in North Texas and well-developed transportation infrastructure mean that inventors could easily travel from throughout the South, Southwest and Plains regions to avail themselves of direct access to a satellite Patent Office in DFW.

Quality of Life

One factor contributing significantly to DFW’s continuing population growth and attractiveness to young professionals is a cost of living well below that of comparable MSAs and near or below the national average in each category. According to 2010 data, DFW’s cost of living index was 91.9 – \(8.1\%\)\(^{10}\) DFW Fast Facts; \(\text{available at http://www.dfwairport.com/visitor/P1_009559.php.}\)

\(^{11}\) Climate data for Dallas (Love Field) 1981-2010 normals; \(\text{available at http://en.wikipedia.org/wiki/Dallas#Climate.}\)

\(^{12}\) Wright Amendment Reform Act, S. 3661, 109th Cong. (2006); \(\text{available at http://thomas.loc.gov/cgi-bin/bdquery/z?d109:S.3661:@@@R.}\)
lower than the national average.\textsuperscript{13} DFW housing costs in particular are approximately 30\% below the national average.\textsuperscript{14}

DFW is unique among MSAs of comparable size in that it offers a range of urban and suburban living choices to suit the needs of a diverse population. The median home cost across DFW is only $151,800, giving families and single individuals the opportunity to rent or lease property in areas that feature the mix of transportation, shopping, medical, cultural and educational resources that best suit their lifestyle.\textsuperscript{15}

In addition to the anchor cities of Dallas and Fort Worth, four major suburbs have populations of 200,000+ for individuals inclined to a more urban lifestyle. Numerous other smaller towns in the area offer a more suburban lifestyle, with some tending more toward a "small-town" feel. Despite the wide-ranging options of the area, the \textbf{average daily commute time is only 27 minutes} due to DFW’s expansive network of highways, toll roads, light rail and public transportation.

When considering relocating, an important consideration is whether one’s spouse, partner and/or children will also be benefited by the move. By way of example, one such consideration is whether other adults in the household are likely to find employment in their chosen trades or occupations. DFW is home to a number of leading employers in the retail, manufacturing, healthcare, finance and professional services industries. In addition to those high-tech companies mentioned above, DFW is home to headquarters or significant operations for the following companies:

\begin{center}
\begin{tabular}{lll}
A.H. Belo Corp. & Alliance Data Systems & American Airlines \\
Bank of America & Baylor Healthcare System & Brinker International \\
Cinemark Holdings & Comerica Bank & The Container Store \\
Corgan Associates & Dean Foods & Dr Pepper Snapple Group \\
FedEx/Kinko’s & Fossil Inc. & Frito-Lay Inc. \\
J.C. Penney Co. Inc. & JPMorgan Chase & Mary Kay Inc. \\
Michaels Stores & Neiman Marcus Group & The Richards Group \\
Rosewood Hotels & Sabre Holdings & Southwest Airlines \\
Supermedia Inc. & Tenet Healthcare Corp. & 7-Eleven Inc. \\
\end{tabular}
\end{center}

And many law firms, real estate agencies, accounting firms, hospitals, school districts and more…

In addition to living and working, DFW residents have access to a wide array of general and specialized doctors and hospitals, including five award-winning medical centers. \textit{\textbf{U.S. News and World Report}} has ranked \textbf{three DFW hospital systems among its 2011 Best Hospitals in America}: University of Texas Southwestern Medical Center, Baylor University Medical Center and Parkland Memorial Hospital. In addition, Children’s Medical Center of Dallas and Cook Children’s Medical Center

\textsuperscript{13} For example: Greater Philadelphia (122.2); Chicago (114.9); Miami (109.9). ACCRA Cost of Living Index, Census Bureau Population Division (2010), \textit{available at} http://www.census.gov/compendia/statab/2012/tables/12s0728.pdf.


in Fort Worth were ranked among U.S. News’s best pediatric hospitals. Each of these five medical centers were home to two or more nationally-ranked specialty practices.\textsuperscript{16}

Further, DFW is home to an established arts and cultural community that continues to grow. Dallas Central Arts District is now the largest in the nation at 68 acres, and world-class facilities continue to be built on a campus that includes the Dallas Museum of Art, the Nasher Sculpture Center, the Dallas Symphony Hall and the Winspear Opera House. Fort Worth is home to the renowned Kimball Art Museum, the Fort Worth Museum of Modern Art and Bass Performance Hall.

DFW also has abundant entertainment choices for adults and children alike. DFW offers adults many choices of local and national retail outlets, including hometown favorite Neiman Marcus; dozens of cinemas offering a range of films from box office blockbusters to art house films; and a tremendous range of cuisines and dining experiences. Families can enjoy the iconic Six Flags Over Texas theme park, the State Fair of Texas (the nation’s largest state fair), zoos and botanical gardens in Dallas and Fort Worth, the Fort Worth Stock Show & Rodeo, and myriad other events throughout the year. DFW is also a great town for sports, with major league baseball, football, basketball, hockey and soccer franchises, as well as auto racing and horse racing tracks.

Finally, DFW residents have extensive choices of schools for their children. According to the 2011 report from the Trial Urban District Assessment’s (TUDA) National Assessment for Educational Progress (NAEP), children tested in Dallas Independent School District performed on par with or exceeded their state and national counterparts in math and reading.\textsuperscript{17} Moreover, of the 110 public school districts in DFW, more than half were rated “Recognized” or better by the Texas Education Agency in 2011, including seven districts – Frisco, Highland Park, Lone Oak, Lovejoy, Southlake-Carroll and Sunnyvale – that were rated “Exemplary.”\textsuperscript{18} All DFW public school districts offer special education and gifted and talented education programs, and some districts offer magnet schools for children with particular aptitude in the arts, science or business.

In addition to fine public schools, DFW is home to a wide variety of private and parochial schools for elementary and secondary school students. Such nationally-recognized institutions as The Hockaday School, St. Mark’s School of Texas, Ursuline Academy, and Fort Worth Country Day School are merely a small sample of private and parochial schools in DFW.

The combination of low costs of living and high quality of community resources is likely the reason DFW has received the following accolades in recent years:

| Dallas ranks 14th of the Top 100 Tech Centers | DFW has the 14th largest metropolitan economy in the world and has been called a "World Capital of the Future" |
| Texas has the 3rd lowest overall tax burden | Dallas ranks 3rd on the list of Best Cities for New College Grads |


\textsuperscript{17} National Assessment for Educational Progress, District Profiles; available at http://nces.ed.gov/nationsreportcard/districts.

Three DFW cities named as America's 50 Best Cities to Live (Plano 11th, Dallas 42nd, Irving 50th)
Source: Bloomberg BusinessWeek

Three DFW cities named as 2011 Best Cities for Families (Dallas 23rd, Fort Worth 67th, Arlington 93rd)
Source: Parenting Magazine

Plano named as one of “America’s 10 Best Places to Grow Up”

Dallas ISD Talented and Gifted High School and Magnet High School for Science and Engineering ranked #1 and #2 in the nation
Source: Newsweek (June 2009)

Intellectual Property Legal Community

To support its technology constituency, DFW and the surrounding area have emerged as a center of vibrant intellectual property legal practice. By way of example, the Dallas Bar Association has thriving intellectual property and computer law sections. The Dallas Bar IP Section alone has approximately 650 members, and the nearby Tarrant County Bar Association (Fort Worth) also maintains a dedicated intellectual property section. In addition, DFW is home to eight (8) American Inns of Court, including The Honorable Barbara M.G. Lynn American Inn of Court that is specific to the intellectual property bar.

DFW is also home to two law schools, SMU Dedman School of Law and Texas Wesleyan School of Law, that have robust intellectual property curricula. Many graduates of these schools choose to remain and practice in DFW, with some embarking on an intellectual property practice.

The Center for American and International Law is home to one of the oldest and most distinguished intellectual property conferences in the State of Texas and the nation. Originally known as the Southwestern Legal Foundation, the Center for American and International Law’s annual conference on intellectual property law will present its 50th anniversary program in November 2012. In recent years, The Center has co-sponsored symposia on the intersection of business and law in the gaming industry, intellectual property protection in China and other cutting-edge topics.

The U.S. District Courts in DFW and the surrounding area are sophisticated in handling intellectual property cases. The U.S. District Court for the Eastern District of Texas – which includes counties to the immediate east and north of the DFW MSA – is already a popular forum for patent litigation. Moreover, the U.S. District Courts for the Northern District of Texas and the Eastern District of Texas – both of which serve counties included in the DFW MSA, as well as counties in East Texas and the Texas panhandle – have been selected for the federal courts’ pilot program for patent cases (mandated by Pub. L. No. 111-349).
CONCLUSION

The Dallas/Fort Worth area is a community of vibrant, growing cities that would be an ideal location for a satellite Patent Office. Drawing upon the many universities in the region, DFW has a substantial base of well-educated science, computing and engineering graduates from which to draw Patent Examiners.

DFW is also a convenient location for inventors, lawyers and government officials seeking to visit the USPTO. Centrally situated in the United States, DFW is home to two major airports and an intersection of major north/south and east/west roadways that make traveling to and from DFW simple.

Finally – and perhaps most importantly – DFW is a wonderful place to live. Low housing costs and a diverse urban/suburban landscape will allow new residents to build lifestyles that are right for them. Moreover, DFW’s top-tier healthcare, recognized schools, arts and entertainment offerings, and low cost of living ensure that residents’ lives are fulfilling, keeping them in DFW for years to come.

For these reasons, DFW is an ideal location for selection as the home for a satellite Patent Office. While we believe that the data contained herein amply supports this conclusion, any questions from the USPTO are welcome. The DFW legal, educational, economic and technology communities sincerely thank the USPTO for its consideration.

Sincerely yours,

Hilda C. Galvan, Esq. – 2012 Chair, Dallas Bar Association Intellectual Property Section
Michael J. Marchand – President, The Center for American and International Law
Amb. James C. Oberwetter – President & CEO, Dallas Regional Chamber
Prof. Xuan-Thao Nguyen – SMU Dedman School of Law
Geoffrey C. Orsak, Ph.D. – Dean, SMU Bobby B. Lyle School of Engineering
Jean-Pierre Bardet, Ph.D. – Dean, UT Arlington College of Engineering
Bruce Gnade, Ph.D. – Vice President for Research, UT Dallas
Mark W. Spong, Ph.D. – Dean, UT Dallas Erik Jonsson School of Engineering and Computer Science
Joseph Picken, Ph.D. – Director of The Institute for Innovation and Entrepreneurship, UT Dallas Naveen Jindal School of Management
Joining in this submission:

Dallas Bar Association Intellectual Property Law Section

The Center for American and International Law

SMU Dedman School of Law Intellectual Property Law Faculty

SMU Bobby B. Lyle School of Engineering

University of Texas at Arlington College of Engineering

Office of the Vice President for Research

Erik Jonsson School of Engineering and Computer Science

Institute for Innovation and Entrepreneurship
### DFW BY THE NUMBERS

#### DFW at a Glance

- **Population**: 6,371,773
- **US population ranking**: 4th
- **Population growth 2000-2010**: 23.4%
- **Area**: 9,286 sq. mi.
- **12 counties**
- **Cities with >100,000**: 14
- **Median age of workforce**: 33.3 years
- **30.6% have Bachelor’s degree or higher**
- **58.3% have some college**
- **Median household income**: $56,377
- **Median home price**: $151,800
- **Cost of living index**: 91.9 (8.1% below national average)
- **Commercial airports**: 2
- **Interstate highways**: 4
- **20 Fortune 500 headquarters**
- **Utility patents originating in DFW (2010)**: 1,932
- **Universities**
  - **DFW University**: University of Texas - Austin
  - **Regional University**: Texas A&M University
  - **Texas Christian University**: Texas Tech University
  - **University of Texas – Arlington**: Rice University
  - **University of Texas – Dallas**: University of Oklahoma
  - **Texas Wesleyan University**: Oklahoma State University
  - **Texas Women’s University**: University of Arkansas
  - **UT Southwestern Medical Center**: University of New Mexico

#### DFW Engineers by Specialty

<table>
<thead>
<tr>
<th>Specialty</th>
<th>Over/Under National Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aerospace</td>
<td>+109.5%</td>
</tr>
<tr>
<td>Biomedical</td>
<td>-56.7%</td>
</tr>
<tr>
<td>Chemical</td>
<td>+15.1%</td>
</tr>
<tr>
<td>Civil</td>
<td>-32.3%</td>
</tr>
<tr>
<td>Computer Hardware</td>
<td>-12.1%</td>
</tr>
<tr>
<td>Electrical</td>
<td>+46.8%</td>
</tr>
<tr>
<td>Electronics (except computers)</td>
<td>+87.1%</td>
</tr>
<tr>
<td>Environmental</td>
<td>-28.6%</td>
</tr>
<tr>
<td>Health and Safety (except mining)</td>
<td>-20.7%</td>
</tr>
<tr>
<td>Industrial</td>
<td>+35.2%</td>
</tr>
<tr>
<td>Materials</td>
<td>+37.4%</td>
</tr>
<tr>
<td>Mechanical</td>
<td>+0.0%</td>
</tr>
<tr>
<td>Mining and Geological</td>
<td>+7.4%</td>
</tr>
<tr>
<td>Petroleum</td>
<td>+209%</td>
</tr>
</tbody>
</table>

#### DFW Cost of Living by Category

<table>
<thead>
<tr>
<th>Category</th>
<th>Over/Under National Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Groceries</td>
<td>-3.7%</td>
</tr>
<tr>
<td>Housing</td>
<td>-30.4%</td>
</tr>
<tr>
<td>Utilities</td>
<td>+5%</td>
</tr>
<tr>
<td>Transportation</td>
<td>+2.3%</td>
</tr>
<tr>
<td>Health care</td>
<td>+3.1%</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>+0.9%</td>
</tr>
<tr>
<td>Composite</td>
<td>-8.1%</td>
</tr>
</tbody>
</table>

#### Science, Computing and Engineering Programs

<table>
<thead>
<tr>
<th>Undergraduate and Graduate Enrollments</th>
<th>DFW Universities (2009-2010)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engineering and math</td>
<td>8,785</td>
</tr>
<tr>
<td>Medical and dental sciences</td>
<td>2,167</td>
</tr>
<tr>
<td>Biology and botany</td>
<td>5,627</td>
</tr>
<tr>
<td>Computer science</td>
<td>3,622</td>
</tr>
<tr>
<td>Physics</td>
<td>429</td>
</tr>
<tr>
<td>Chemistry</td>
<td>757</td>
</tr>
</tbody>
</table>

#### Comparative Cost of Living

<table>
<thead>
<tr>
<th>Category</th>
<th>Over/DFW Value</th>
</tr>
</thead>
</table>
| Housing           | New York City: +456%
|                   | Los Angeles: +186%
|                   | Chicago: +85%
|                   | Philadelphia: +456%
| Transportation    | New York City: +22%
|                   | Los Angeles: +18%
|                   | Chicago: +22%
|                   | Philadelphia: +18%
| Health Care       | New York City: +28%
|                   | Los Angeles: +4%
|                   | Chicago: +5%
|                   | Philadelphia: +28%
| Composite         | New York City: +127%
|                   | Los Angeles: +48%
|                   | Chicago: +27%
|                   | Philadelphia: +37%