Strategic IT and Data Center Relocation

Issue Profile

- Study Overview
- Part I: General Trends in Relocation Criteria
- Part II: Case Examples of Relocation: Apple Computer and Citicorp
- Part III: Location of New IT/Data Center Relocations and Expansions, 1999-2000
- Part IV: IT/Data Center Relocation and Expansion by City/Region
- Part V: Profiles: Cities To Which Companies Are Relocating
Study Overview

The following study is divided into five sections:

**Part 1: General Trends in Relocation Criteria** – briefly outlines the most common relocation considerations for the corporation and employees.

**Part 2: Case Studies of Relocation** – summarizes the data center location decision criteria and selection processes of Apple Computer and Citicorp. The Apple case study supports the notion that companies are eager to move their data centers away from Silicon Valley to IT centers with lower wage rates. The Citicorp example suggests that IT/Data center location decisions are driven by range of concerns – labor costs being only one of many.

**Part 3: Location of New or Expanded Data Centers** – presents table that summarizes IT data center location announcements in 1999 and early 2000. “Expanded” data centers are previously existing data centers that are experiencing expanded operations or new responsibilities. Information for the table was drawn from the trade press, especially Business Wire and PR Newswire, and from a range of sources found in the search engines DJ Interactive, Lexis/Nexis, and Proquest. Unfortunately, the press provides ample information on where companies are locating new IT/data center operations, but provides little insight into the decision criteria.

**Part 4: Data Centers, New and Expanded, 1999-2000** – presents a graphical summary of the table in Part 3 from recent articles published regarding data center relocation and expansion. Northern Virginia/DC and Atlanta have been the most common locations for new data centers during this time frame. Silicon Valley is the third most common location new data centers than other IT – less common than Northern Virginia/DC and Atlanta, but more frequent than alternative IT centers like Dallas and Austin.

**Part 5: Profiles: Cities to Which Companies Are Relocating** – presents a summary of the advantages offered by the most common alternative to Silicon Valley for new data centers: Atlanta GA; Austin TX; Dallas TX; Denver CO; Phoenix AZ; and Washington, DC/Northern Virginia. This section is intended to be a summary of economic information that we feel is relevant to the relocation decision, and should not be seen as advice. The information was gleaned from a variety of sources, including local Chambers of Commerce, Money Magazine’s list of “Best Places to Live,” and Fortune Magazine’s list of “Best Cities for Business.” For your convenience, we have enclosed the relevant literature and organized it by location.
Part 1: General Trends in Relocation Criteria

**Economic Incentives for Corporations to Consider**

The article “Strategic Drivers of Location Decisions for Information-Age Companies” makes the following observations about companies’ criteria in considering relocation:

- **High-Quality Talent vs. Financial Incentives** – The existence of a local workforce equipped with the appropriate industry-related skills, and the local means to train potential employees in those skills, such as universities and technical institutes, were more influential in determining location decisions than financial incentives.

- **Location** – Companies rated the appeal of the new location to the existing employee base as more important in the final decision than financially-based economic development incentives.

- **Working With Local Government** – Companies emphasized the need for speed and responsiveness to their specific concerns from municipalities and economic development agencies, and considered these more important than financial economic development incentives.


**Considerations for Employees: Quality of Life Factors**

The article “Strategic Drivers of Location Decisions for Information-Age Companies” makes the following observations about employees’ criteria in considering relocation:

- **Housing/Commuting** – The quality of life factors that are most influential in the site selection process are those that affect the quality of employees’ daily lives: housing quality, ease of commuting, access to parking, and overall visual attractiveness.

- **Education** – Educational institutions, both those that train potential employees and those that serve the needs of current employees’ families, were the most critical public policy related factors.

- **Making Considerations for Employees at all Levels** – Companies pay most attention to those community attributes that have the greatest impact on their employees’ daily lives: their “ease of living” in terms of both costs and conveniences. A range of housing options for a range of income levels that is within an easy commuting distance is necessary. Good schools and amenities for families are also considered essential.

Part II: Case Studies of Relocation

Apple Computer: Silicon Valley to Austin, TX

Problem
Apple Computer faced intense competition in the personal computer business and a critical need to lower operating costs. Most of Apple’s operations were in Silicon Valley, a notoriously expensive location due to the competitive labor market and high cost of living.

Solution
Apple Computer relocated from Silicon Valley to Austin, Texas in the early 1990s. The functions that were transferred to Austin included “back office” operations such as payroll, accounting and customer service. Some Apple employees relocated to Austin, but many were hired locally. The entire process, from search to move, took 15 months. Apple leased a space to meet current needs, and also purchased a 130-acre tract of land in Williamson County for potential future expansion.

Relocation Search Process
Apple did most of the cost analysis in-house, although it also used a consultant to provide ratings of the cost of living in fifteen cities. Apple sough to save primarily on wage costs, not real estate and facility costs, but tax savings – such as no personal income tax and low property taxes – were also important consideration.

Apple also wanted a location that provided a strong supply of computer-literate people and an attractive lifestyle for younger employees. The company also considered Phoenix, AZ, and Charlotte, NC, but found that Austin was the most accommodating, organized and well-prepared for growth. All of the locations that Apple considered offered comparable economic incentives.

Source
Citicorp: Project 2005

Problem
Citicorp needs to reduce costs.

Solution
Citicorp plans to “co-locate” various Citicorp businesses in selected cities within large sites of 2,500 employees each. Eventually, the financial services giant expects to reduce the number of its major locations in the US by about two-thirds. Citicorp selected Tampa, FL as its first pilot location after a study that compared Tampa to twelve other cities.

Location Selection Process
A “Corporate Criteria Committee” consisting of senior managers from all facets of Citicorp’s operations, gave feedback throughout the selection process.

Three analytic steps were followed:

1. Tampa was benchmarked against twelve cities for demographics, costs, quality of life, and business climate. The comparison to the New York City metropolitan statistical area – the site of Citicorp’s headquarters – was particularly dramatic. Relative to New York:
   - Tampa’s labor costs are 35 percent lower.
   - Tampa’s median house price is one-third lower.
   - Commutes average 23 minutes rather than 38 minutes in New York.
   - Tampa features more outdoor recreation amenities.

2. After Tampa emerged superior to the other eleven cities considered, its labor force was examined in detail.

3. Studies on a number of other factors – such as spousal employment opportunities, weather risks, crime, and future competition for labor from other corporate relocations – were reviewed.

Sources
## PART III: LOCATION OF NEW OR EXPANDED DATA CENTERS

<table>
<thead>
<tr>
<th>Company</th>
<th>Company Description</th>
<th>Company HQ</th>
<th>New or Expanded* Data Centers</th>
<th>Source</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>186K</td>
<td>Tech. Firm, Commercial Solution Provider</td>
<td>Boca Raton, FL</td>
<td>Atlanta, GA</td>
<td>PR Newswire</td>
<td>10/18/99</td>
</tr>
<tr>
<td>AboveNet</td>
<td>Internet services</td>
<td>San Jose, CA</td>
<td>Reston, VA</td>
<td>Washington Post</td>
<td>7/5/99</td>
</tr>
<tr>
<td>Amazon.com</td>
<td>Internet retailer</td>
<td>Seattle, WA</td>
<td>Fairfax Co., VA</td>
<td>Washington Business</td>
<td>10/8/99</td>
</tr>
<tr>
<td>America Online (AOL)</td>
<td>Online services</td>
<td>Dulles, VA</td>
<td>Prince William, VA</td>
<td>Washington Post</td>
<td>3/2/99</td>
</tr>
<tr>
<td>AT&amp;T</td>
<td>Long Distance Telephone Company</td>
<td>New York, NY</td>
<td>Atlanta, GA, Chicago, IL, Dallas, TX, Los Angeles, CA, Phoenix, AZ, Seattle, WA, Washington, DC</td>
<td>InternetWeek</td>
<td>9/20/99</td>
</tr>
<tr>
<td>AppliedTheory</td>
<td>Internet business solutions</td>
<td>New York, NY</td>
<td>Hayward, CA, Columbia, MD, Syracuse, NY*</td>
<td>PR Newswire</td>
<td>8/27/99</td>
</tr>
<tr>
<td>Breakaway Solutions</td>
<td>Internet business and customers relationship services</td>
<td>Boston, MA</td>
<td>Chicago, IL</td>
<td>PR Newswire</td>
<td>1/19/00</td>
</tr>
<tr>
<td>Data Return Corp.</td>
<td>Web and app hosting services</td>
<td>Irving, TX</td>
<td>New York, NY, Washington, DC</td>
<td>Business Wire</td>
<td>12/29/99</td>
</tr>
<tr>
<td>Data Systems West</td>
<td>Internet Start Up</td>
<td>Woodland Hills, CA</td>
<td>Woodland Hills, CA</td>
<td>VARBusiness</td>
<td>12/1/99</td>
</tr>
<tr>
<td>Derivion</td>
<td>E-Bill presentment and Payment (EBPP) services</td>
<td>Atlanta, GA</td>
<td>Atlanta, GA</td>
<td>PR Newswire</td>
<td>9/7/99</td>
</tr>
<tr>
<td>Equant NV</td>
<td>Application service provider</td>
<td>Amsterdam, Netherlands</td>
<td>Atlanta, GA</td>
<td>Communications Week</td>
<td>9/20/99</td>
</tr>
<tr>
<td>Equinox Systems</td>
<td>Networking devices</td>
<td>Sunrise, FL</td>
<td>Loudoun Co., VA</td>
<td>Washington Times</td>
<td>8/16/99</td>
</tr>
<tr>
<td>e.spire Communications</td>
<td>Communications company</td>
<td>Herndon, VA</td>
<td>Fort Lauderdale, FL</td>
<td>Business Wire</td>
<td>1/5/00</td>
</tr>
<tr>
<td>Exodus Communications</td>
<td>Internet hosting.</td>
<td>Santa Clara, CA</td>
<td>Atlanta, GA, Austin, TX</td>
<td>Austin American Statesman</td>
<td>11/29/99</td>
</tr>
<tr>
<td>FirstWorld Communications</td>
<td>Provides Internet and telephony solutions</td>
<td>Denver, CO</td>
<td>Denver, CO, San Diego, CA, Glendale, CA, Santa Clara, CA</td>
<td>Business Wire</td>
<td>9/1/99</td>
</tr>
<tr>
<td>GetThere.com</td>
<td>Travel reservations</td>
<td>Menlo Park, CA</td>
<td>Santa Clara, CA, Northern Virginia</td>
<td>Network</td>
<td>12/1/99</td>
</tr>
<tr>
<td>GlobalCenter</td>
<td>Internet and online services</td>
<td>Sunnyvale, CA</td>
<td>Sunnyvale, CA, Anaheim, CA</td>
<td>Business Wire</td>
<td>1/31/00</td>
</tr>
<tr>
<td>HSBC Bank USA</td>
<td>Bank</td>
<td>Buffalo, NY</td>
<td>Buffalo, NY</td>
<td>Buffalo News</td>
<td>2/11/00</td>
</tr>
<tr>
<td>IDT Corporation</td>
<td>Multinational carrier, phone company, and Internet Service Provider</td>
<td>Newark, NJ</td>
<td>Newark, NJ, Miami, FL, Los Angeles, CA</td>
<td>Business Wire</td>
<td>2/22/00</td>
</tr>
<tr>
<td>Intel Corporation</td>
<td>Microprocessors</td>
<td>Santa Clara, CA</td>
<td>Folsom, CA, Santa Clara, Chantilly, VA</td>
<td>Electrical Engineering Times</td>
<td>10/14/99</td>
</tr>
<tr>
<td>Company</td>
<td>Company Description</td>
<td>Company HQ</td>
<td>New or Expanded* Data Centers</td>
<td>Publication</td>
<td>Date</td>
</tr>
<tr>
<td>---------------------</td>
<td>-------------------------------------------</td>
<td>--------------------</td>
<td>----------------------------------------</td>
<td>----------------------</td>
<td>-----------</td>
</tr>
<tr>
<td>Intéra</td>
<td>Internet firm</td>
<td>St. Louis, MO</td>
<td>Pleasanton, CA</td>
<td>PR Newswire</td>
<td>11/15/99</td>
</tr>
<tr>
<td>IXC Communications</td>
<td>Telecom services</td>
<td>Cincinnati, OH</td>
<td>Austin, TX</td>
<td>Business Wire</td>
<td>6/7/00</td>
</tr>
<tr>
<td>(Broadwing)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>JV Web Inc.</td>
<td>Web hosting</td>
<td>Houston, TX</td>
<td>Phoenix, AZ</td>
<td>Business Wire</td>
<td>1/8/99</td>
</tr>
<tr>
<td>MSI Holdings Inc.</td>
<td>Computer systems integration, Web site</td>
<td>Austin, TX</td>
<td>Atlanta, GA, Denver, CO, Phoenix, AZ,</td>
<td>Business Wire</td>
<td>1/19/00</td>
</tr>
<tr>
<td></td>
<td>development</td>
<td></td>
<td>Tampa, FL, Austin, TX, Dallas, TX</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Computer Systems</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Communications</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>OrcoNet.com</td>
<td>Internet access services</td>
<td>Orange, CA</td>
<td>Atlanta, GA, Chicago, IL, Dallas, TX,</td>
<td>Business Wire</td>
<td>2/3/00</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Denver, CO, Las Vegas, NV, New York, NY</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pacific Gateway</td>
<td>Telecommunications</td>
<td>Burlingame, CA</td>
<td>Loudoun, VA</td>
<td>Washington Post</td>
<td>10/7/99</td>
</tr>
<tr>
<td>PSINet Inc.</td>
<td>Internet company</td>
<td>Herndon, VA</td>
<td>Atlanta, GA</td>
<td>Atlanta Business</td>
<td>10/15/99</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Chronicle</td>
<td></td>
</tr>
<tr>
<td>Qwest</td>
<td>Telephone, Internet and multimedia</td>
<td>Denver, CO</td>
<td>Sterling, VA</td>
<td>Washington Times</td>
<td>8/16/99</td>
</tr>
<tr>
<td></td>
<td>services</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Security First</td>
<td>Builds, delivers and operates Internet</td>
<td>Atlanta, GA</td>
<td>Norcross, GA</td>
<td>Business Wire</td>
<td>9/15/99</td>
</tr>
<tr>
<td>Technologies</td>
<td>apps for financial institutions</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corporation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TeleComputing</td>
<td>Windows app delivery and computing</td>
<td>Fort Lauderdale, FL</td>
<td>Vienna, VA</td>
<td>Business Wire</td>
<td>7/12/99</td>
</tr>
<tr>
<td>Inc.</td>
<td>services</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unnet</td>
<td>Internet and online services</td>
<td>Fairfax, VA</td>
<td>Atlanta, GA, Boston, MA, Chicago, IL,</td>
<td>PC Week</td>
<td>8/9/99</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Dallas, TX, Los Angeles, CA, New York, NY, San Jose, CA*, Washington, DC*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>USinternetnetworking</td>
<td>IT consulting and services</td>
<td>Annapolis, MD</td>
<td>Milpitas, CA*</td>
<td>Business Wire</td>
<td>9/13/99</td>
</tr>
<tr>
<td>Verio</td>
<td>Internet and online services</td>
<td>Englewood, CO</td>
<td>Washington, DC</td>
<td>ISP Business News</td>
<td>1/4/99</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Constitution</td>
<td></td>
</tr>
</tbody>
</table>
Part IV: IT/Data Center Relocation and Expansion By Region, 1999-2000

City/Region

Sources: Information for this chart comes from the table in Part 3, pages 5-6.
Part V: Profiles: Cities To Which Companies Are Relocating

ATLANTA, GA

“There is competition for resources in Atlanta. But if we hire someone in Silicon Valley, we have to pay them five times what we pay them here.”

Mark Cohen, Marketing Director, e-Solutions Software.

The company chose Atlanta because it is “a hotbed” of technology growth, yet it is also affordable, according to Cohen.

Source: Metro Atlanta Chamber of Commerce

Economic Incentives

- The State of Georgia and metro Atlanta offer a range of business relocation incentives, including tax credits and exemptions.
- Average construction costs for both urban and suburban Atlanta are lower than other IT centers like San Francisco, Washington DC, and Silicon Valley. Construction costs are comparable to Dallas/Fort Worth, TX.
- Ranked #5 in Fortune Magazine’s “Best Cities for Business.”

Employee Quality of Life

- Atlanta’s cost of living is 3% higher than the national average. By comparison, Los Angeles is 20 per cent higher, Riverside/San Bernadino is 9 percent higher, Oakland is 53 percent higher and the DC metro area is 37 percent higher.

IT Concerns

- Atlanta’s IT talent pool is nourished by strong IT programs at several local universities, including Georgia Tech, Emory University, the DeVry Institute of Technology, and Southern Polytechnic State University.

Recent Developments

Since January 1999, 10 companies have established, or have announced that they are establishing, data centers in the Atlanta region:

- 186K     MSI Holdings Inc.
- AT&T     OrcoNet.com
- Derivion  PSINet Inc.
- Equant NV  Security First Technologies Corporation
- Exodus Communications, Inc.  UUNet

Relevant Articles

AUSTIN, TX

Economic Incentives
- Low cost of doing business: Austin’s overall business costs are 8 percent below the national average.
- Austin’s price of land and rental rates are lower than other IT centers like Dallas, Colorado Springs, and San Jose.
- Reasonable tax structure.
- Austin is ranked #3 in Fortune Magazine’s “Best Cities for Business.”

Employee Quality of Life
- Austin made Money’s list of “Best Places to Live 2000.”
- It’s cost of living is in lowest 30 percent of all US metro areas.
- The average commute time: 21 minutes.
- Texas has no state income tax, and no local income tax.
- Austin offers a wide range of cultural and recreational opportunities.

IT Concerns
- Austin boasts a strong group of start-up, high-tech companies, mixing with established companies such as Dell Computer.
- Well-educated workforce
- Major research university: University of Texas
- High degree of high-tech industry conglomeration: computers and peripherals, software.
- High level of computer literacy: 68 percent of households have computers, 61 percent access the Internet, and 77 percent of computer households use email.

Since January 1999, 2 companies have announced that they are establishing new data centers in the Austin region: Exodus Communications Inc., and IXC Communications, Inc.

MSI Holdings Inc. announced that it is expanding its Austin data center.

Relevant Articles
DALLAS, TX

Economic Incentives
- Dallas is ranked #1 “Best City for Business” by Fortune Magazine.
- Dallas is ranked as “A Top Business Location” in the US by Forbes magazine.
- Texas has no state income taxes on businesses.
- Dallas’ economic growth rate of 5 percent per annum is higher than national average.

Employee Quality of Life
- Cost of living significantly lower than most other major IT centers.
- No state income tax; no local income tax.
- Symphony, opera, museum, professional sports, more restaurants per capita than New York City.

IT Concerns
- Dallas ranked #2 in size and importance of high-tech economy in a study of 315 metropolitan areas conducted by the Santa Monica-based Milken Institute.

Recent Developments
Since January 1999, 3 companies have announced that they are establishing new data centers in the Austin region: AT&T, OrcoNet.com, and UUNet.

MSI Holdings Inc. announced that it is expanding its Dallas data center.

Relevant Articles
DENVER, CO

Economic Incentives
- Denver consistently ranks as one of the top cities in the country for doing business – for both large and small concerns.
- Office lease rates in metro Denver are among the lowest of major cities in the US.
- Denver ranked #8 in Fortune Magazine’s “Best Cities for Business.”

Employee Quality of Life
- Denver ranks just slightly above the national average for cost of living, unusual for a city of its size.
- Denver imposes no local income taxes.

IT Concerns
- Telecommunications (US West), aerospace (Lockheed Martin) and computer software (Sun Microsystems) play important roles in Denver’s economy.

Recent Developments
Since January 1999, 3 companies have announced that they are establishing new data centers in the Denver region: FirstWorld Communications, Inc., MSI Holdings Inc., and OrcoNet.com.

Relevant Articles
**PHOENIX, AZ**

“Phoenix is rising in the minds of many companies looking for an attractive place to set up IT shop.”


**Economic Incentives**
- Real estate in Phoenix is affordable.
- Phoenix is safe from natural disasters.
- The city is home to a growing labor pool.
- *Site Selection*, a national economic development magazine, recently ranked Phoenix sixth among major metro areas that are attracting business expansion and relocations.

**Employee Quality of Life**
- Phoenix has a low cost of living
- Phoenix has no local income taxes.

**High Tech Concerns**
- 46 percent of Arizona’s manufacturing jobs are high-tech, and there is tremendous potential for high-tech employment opportunities.

**Recent Developments**
Since January 1999, 4 companies have announced that they are establishing new data centers in the Phoenix region: AT&T, JV Web Inc., MSI Holdings Inc., and National Computer Systems (NCS).

**Relevant Articles**
“Intel’s Spectacular Southwest.” *Site Selection*. August 1995.
WASHINGTON DC, NORTHERN VA, AND THE MD SUBURBS

“Tech firms are attracted to the area’s strong technical and telecom infrastructure, technology-heavy work force, and business-friendly tax and regulatory policies.


Economic Incentives
- The Washington DC area, especially northern Virginia, have lower land costs than other technology centers like Silicon Valley and Boston

IT Concerns
- Close proximity to many colleges and universities.
- A recent study by PriceWaterhouseCoopers found that the telecommunications, computer and information technology sectors employ 330,000 in the region, almost as many as are employed by the federal government.
- According to Myra Peterson, president of Omniverse Digital Solutions: “Northern Virginia reminds me of a young Silicon Valley because it has a good resource base of think tanks and support programs for IT entrepreneurs. This is where innovation is happening. There are large and small computer hardware, software and Internet companies all mixed together and fostering creativity.”
- The region is second only to Silicon Valley in the number and scope of IT companies.

Recent Developments
Since January 1999, 15 companies have established, or have announced that they are establishing, data centers in the Atlanta region:

<table>
<thead>
<tr>
<th>AboveNet</th>
<th>Intel Corp.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amazon.com</td>
<td>Interliant</td>
</tr>
<tr>
<td>America Online (AOL)</td>
<td>Pacific Gateway</td>
</tr>
<tr>
<td>AppliedTheory</td>
<td>Qwest</td>
</tr>
<tr>
<td>AT&amp;T</td>
<td>TeleComputing Inc.</td>
</tr>
<tr>
<td>Data Return Corp.</td>
<td>UUNet</td>
</tr>
<tr>
<td>Equinox</td>
<td>Verio</td>
</tr>
<tr>
<td>Get There.com</td>
<td></td>
</tr>
</tbody>
</table>

Relevant Articles

2 Ibid.