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**AJR:** Your company, Scorpion Computer Services, recently began applying its high-tech expertise, which you have traditionally used to serve the military, start-up companies and Fortune 500 corporations, to wealthy families and their family offices. How did you get into this niche market?

*Family Office Association Q&A*

## **BEST PRACTICES: CYBER SECURITY IN THE DIGITAL AGE** w/Walter O'Brien

**Scorpion:** When I launched my company 25 years ago, I started in technology by hiring prodigies to solve problems. Our view remains the harder the problem, the better.

Over time we expanded our services into 22 different service offerings in three basic practice areas: Planning (discovery and strategy), Execution (Delivery Management) and Support (Quality, Risk and Compliance). Our results supersede those of more traditional large consulting firms in terms of performance, architecture, flexibility and quality of the final product. Our big-picture thinking, customizing our approach and building in objective accountability with key performance indicators is what sets us apart and produces results.

I created my own family office a couple years ago, when my company's fast growth resulted in my acquiring a lot of resources which I need to manage. I went to family office seminars to learn about that world. At the same time, our clients shared our success and their assets grew significantly. The more money our clients accumulated, the more ambitious and more complex their goals for us became.

So today, in addition to the military, startups and Fortune 500 companies, our clients include more than 14 billionaires and numerous families with net worth of more than \$100 million each. These clients include royal families in different countries who hire us to analyze their entire country and design a sustainable future roadmap for that country.



**AJR:** You refer to your family office activities as “up-concierge” services. What is your menu of such services?

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**Scorpion:** Family offices engage us for many challenges, even non-technical challenges. Normally you “down concierge” tasks that are others can do for you like booking flights or hotels, we have coined the term “up concierge” which is a concept that allows you to outsource more complex tasks that you otherwise could only do yourself if you had the time. We provide “intelligence on demand” as a service for funded challenges or another way of putting it “You bring the dream, we’ll bring the plan!”

We have a large menu of capabilities, but we have found that family offices often don’t know exactly what they need, they only know their final goal. They have dreams such as “create a casino” or “automate my factory” and they do not have the time or the will to work out all the details, find and vet the resources and then manage the plan thru execution. We can execute on such ambiguous goals and handle all the details.

For example, one family consulted with us to develop a model to predict which racehorses had the potential to be champions before they begin training them. We measured elements such as lung and heart capacity, leg length and the horse’s IQ. We strapped an iPhone with an accelerometer app to study the horses movement when galloping, we then used software to figure out which pieces of data mattered the most. We sequenced equine DNA and found a gene that indicates muscle mass and density, so now we can tell—before a horse is born—if it can become a race horse. We discovered that one of the main factors is the horse’s IQ. A smart horse is a good horse. Our approach worked. The horse we selected for the client won at the racetrack. No one had tried our approach before, but by applying math to the problem, we found a way to meet this client’s challenge.

Other family office clients hired us to modernize a food factory it owns; a casino owner had us develop a black jack analyzer. We figured out that the sequence of cards dealt out reveals whether the dealer is cheating, if a player is colluding with the dealer, or if a deck was not shuffled properly.



**AJR:** Those are some very exotic one-of-a-kind projects. What are some of the more common problems family offices come to you to solve?

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**Scorpion:** Our “up concierge” menu includes securing the family and its data. This is one of the most frequent concerns of high net worth clients. As for their financial and personal data such as family photos and videos, they want to keep it digital, but social media sites such as Facebook are not the most private, let alone secure, places. So we have built a “moon vault” in the Cloud. Having architected in Amazon’s Cloud for eight years, we know how to keep data secured, encrypted and spread pieces of data across several continents. Systems, machines, or a whole city could lose power but in the history of mankind, the infrastructure of several continents have never gone down at same time. The advantage of this approach is, if someone wants to subpoena your data in the U.S., the government would have to subpoena you in several different sovereignties to get all your records. By not having all your data in any one country’s jurisdiction, the U.S. government would have to know where you store everything, and even if they did, they would not have jurisdiction to access any of what is stored outside the U.S. and they still couldn’t decrypt it without your password. For as little as \$50 a month you can begin to rent storage space in the cloud.

Some of our clients worry about the kidnapping of themselves or their children. We have the capability to provide physical as well as digital security to our clients, from installing remote view security cameras to bug sweeps of your home or office to providing bullet proof vehicles when you travel out of country. Others have been stalked and need us to set a trap to draw out the stalker or remove their ability to track the clients location and activity.

We also perform due diligence with our 240-point inspection of what can go wrong with a client’s technology and processes. If a client is interested in investing in a dot-com, we can give that company a score of A, B or C in two days, to allow the investor to decide whether or not to invest, or to pull out early. For example, if you want to buy a company that claims they have x number of customers and that it is growing 30 percent a month, we don’t just look at their books, even if they have been audited and signed off. We say that the only source not lying in an acquisition are the machines and we are the machine whisperers. The areas we check on include call center logs, to see how many people have tried to return the company’s product. If the company claims to have 1 million users, we will verify how many actually logged on recently. We often invalidate a company’s audited financial statements by 60 percent. A company may have been cooking the books for the last 12 months, so we analyze the computer logs going back farther than 12 months. We can figure out what’s really going on.



**AJR** (*cont'd*): Those are some very exotic one-of-a-kind projects. What are some of the more common problems family offices come to you to solve?

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**Scorpion** (*cont'd*): It's common for the head of a family to want to create a legacy for their offspring so we provide the "adult supervision" needed to ensure that the offspring's startup company is successful by sitting on the board or becoming the interim chief technology officer. By supervising we make sure that the family is never "ripped off" by vendors and suppliers.

Disaster recovery and business continuity are services families avail of frequently. When one client inherited her father's company, we were brought in to assess any risks to the business. We found that all of the company's records were backed up, but the backup tapes were placed on top of the server, one electrical fire or flood and all would be lost. We set up a process to back up every night, and to transmit that backup 20 miles away. We take this offsite snapshot and store it in a vault, so the company doesn't go out of business when a disaster event occurs. This client's father also hadn't upgraded the firm's technology in 20 years, and the daughter didn't know where to start. We learned the business, analyzed the competition and designed a five year roadmap to success. We then helped the business execute this roadmap of modernization so it could remain the market leader for future generations.

We often play the role of technical advisor to protect the client from:

1. being held ransom by the technologists they hire in order to get their IP back
2. IT security risks – hackers, viruses, etc.
3. inappropriate valuations when buying or selling an asset
4. vendors/contractors charging exorbitant fees
5. poor project governance and risk management



**AJR:** National Security Agency Director Gen. Keith Alexander estimates that cyber-thieves have stolen \$1 trillion of intellectual property over the internet, which he calls “the greatest transfer of wealth in history.” In what ways are single family offices most vulnerable?

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**Scorpion:** The amount of data we generate each year is growing exponentially and families are not taking appropriate precautions with business and personal data, both at a basic level in terms of organization, but also in terms of secure cloud-based and hard copy back-ups.

The total number of records containing sensitive personal information involved in reported security breaches in the U.S. is 562,943,732 since 2005 and last year, 40 percent of the breaches were malicious attacks – hacking and insider theft (A Chronology of Data Breaches, Privacy Rights Clearinghouse, July 2012).

Hackers particularly target high-profile and wealthy individuals. I recommend that at least once per year, the family agrees upon a security strategy for the family office to execute in coordination with outside experts. This strategy would include password handling, backup frequency, approved devices, etc.

Even if your live production system is secured, the hacker can add themselves to the other three copies. That’s right: you do not have one system protect, you have at least three: one each for development, test environment and the backup/failover. If a hacker accesses these and then causes a production failure, when you restore your systems from their backups, the hacker’s account is now “restored” into the live system as a valid user.

Another easy entry point for hackers is weak IT asset disposal policies where your hard drives are undeleted. That makes it fairly easy for that data to be intercepted after you donate the drives to a local school for example.

Cyber security is a complex and difficult area. Many families ask their web resource, hosting company or network administrator to just “handle it.” This is similar to asking a chiropractor to perform brain surgery. You need a specialist.

### The Perfect Password

Choosing crack-proof passwords is a huge challenge, because effective passwords:

- are unique for each Website and account
- are long
- have random combinations of upper and lower case letters
- use symbols such as #@%&\* or dot dot dot
- use two words instead of one

The problem is these criteria make it impossible for you to remember your own passwords.

The website [howsecureismypassword.net](http://howsecureismypassword.net) can tell you how secure your passwords are.

#### For instance:

Fluffy could be cracked almost instantly  
Fluffy1 would take 19 seconds for a PC to crack  
fluffy1 would take 14 minutes  
Fluffy123 would take 7 hours  
Fluffy456 would take 15 hours  
fluffy123 would take 39 days  
fluffydog would take 22 minutes  
fluffydog would take 8 days  
fluffydog1 would take 10 days  
fluffydog123 would take 25,000 years  
fluffydog#123 would take 26 million years!  
fluffydog123... would take 335 billion years!



**AJR:** What are the most important ways SFOs can protect themselves from cyber attacks or hackers?

**AJR:** How should families structure their approach to IT with respect to planning and resourcing – both for the family office itself as well as the underlying interests (properties, business assets, etc.)?

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**Scorpion:** First, family offices should make strategic planning around IT security part of the annual and quarterly process. This could very well be the family's number-one risk, so it makes sense to invest in talent, either full time or outsourced experts, to help you develop and maintain an IT security strategy.

SFOs should focus on data protection and back-up as a foundation. They should ensure that their data is backed up and encrypted offsite using solutions such as Dropbox, Carbonite or Mozy. Also, copy all data to two encrypted external hard drives and keep one offsite. Refresh these backups regularly.

Hire third-party white-hat hackers to conduct a bi-annual attack and penetration testing across your major personal and business locations

**Scorpion:** Just like tax planning, IT planning should be performed by a professional and updated frequently as your options change. IT issues carry more risk than most other aspects of a family office. Breaches on personal or business data can cause significant reputational, financial, and legacy-related costs. Prioritizing family office data, identifying and closing vulnerabilities across locations – business and personal use properties – and engaging in ongoing monitoring are critical to ensuring that the safety and soundness of a family's IT ecosystem.

Our government, royalty and high net worth clients have similar needs. They just want a solution that can ensure that:

1. their latest technology and best practices are leveraged
2. their data is safe for decades—for future generations
3. accessibility is entitled, safe and secure
4. data and tools can be accessed from anywhere
5. there is no limit to how much can be stored
6. data cannot be lost due to a single incident
7. cost is reasonable
8. usability is intuitive



**AJR:** How safe, really, is it to keep personal and financial data on the cloud?

**AJR:** When wealthy family members participate in social media sites such as Facebook, what are some of the most important safety do's and don'ts?

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**Scorpion:** The Cloud is actually faster, less costly and more secure than most people think. The Cloud comes in many forms today and is misunderstood by most people.

Let's start with a simple definition of the Cloud: It is a collection of professional data centers that are geographically dispersed and designed to work together to eliminate any single point of failure.

As a rule, no data should be kept on local devices such as laptops and smart phones, which are easily dropped or stolen. These devices should simply provide access to your real data, which is secured in the Cloud. For a family on the move, the Cloud should be the vault where you store all data and access it from anywhere. The Cloud model is the very definition of economy of scale. When you consider total cost of ownership, the cloud is far less costly (as little as ten cents per GB per month) than purchasing and maintaining your own hardware. Also, the Cloud will grow and scale with your family's needs.

Those less familiar with the Cloud often raise concerns regarding the security of the data. In fact, it is a guarded, redundant multi-billion dollar cloud infrastructure on multiple continents with its own power substations. In fact, the NSA became peeved at Apple recently because it was not able to hack into users' iMessages that were stored on their Cloud accounts.

My point is, the Cloud is likely more secure than wherever you keep your data right now.

**Scorpion:** It's important to be very careful about what you and your family list on Facebook and other similar sites. For instance:

- Upload no pictures you wouldn't want everyone to see.
- Minimize personal information, such as where you were born, where you went to school, or even your pet's name. These are often your banks' security questions. Similar information can be used by stalkers to wait for your kids after school or before ballet practice (since your kid told them where that is).
- Be careful about clicking the "like" button as this tells others way more about you than you think. A recent study conducted by Cambridge University and Microsoft Research shows how the patterns of Facebook "likes" can very accurately predict your sexual orientation, satisfaction with life, intelligence, emotional stability, religion, alcohol and drug use, relationship status, age, gender, race and political views, among many others.



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Angelo J. Robles

*Family Office Association Q&A*

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**Angelo J. Robles** is the Founder and CEO of the Greenwich, Connecticut-based Family Office Association (FOA), a global membership organization that provides private educational and networking forums with top experts, plus thought leadership and proprietary research about and for multiple generations of wealthy families and the professionals who run their single family offices.

A member of the Princeton Council on Family Offices and the NYU Stern Family Office Council, Mr. Robles has a long track record of leadership positions at top financial service companies, including UBS. Before launching FOA, he engaged in several successful entrepreneurial ventures: He founded the New England chapter of the Hedge Fund Association (where he also served as president) and pioneered online retirement planning for Fortune 1000 executives with two Internet startups: 401KRollover.com and IRARollovers.com.

At FOA, Mr. Robles has spearheaded a series of provocative and groundbreaking Q&As with industry experts, and white papers that address the unique needs of ultra high net worth families in the U.S. and around the globe. These publications provide in-depth case studies of vibrant, multi-cultural single family offices as well as sophisticated approaches to wealth protection and growth, philanthropy, technology, social media, legal, tax, insurance and lifestyle concerns.

Mr. Robles has written several books and articles, and has appeared on Bloomberg Radio & TV and quoted in Thompson Reuters, Institutional Investor, Opalesque, Registered Rep, HFM Week, Investment News, EurekaHedge, The Luxury Institute, Private Asset Management, The Greenwich Times and many others.

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Walter O'Brien

*Family Office Association Q&A*

## **BEST PRACTICES: CYBER SECURITY IN THE DIGITAL AGE**

w/Walter O'Brien

**Walter O'Brien** (Scorpion) is the President and CEO of ScorpionComputerServices.com a think tank for hire that provides intelligence on demand as a concierge service for funded challenges. Scorpion has created over 177 unique technology inventions, hacked into NASA at 13 years old and the Bank of England at 16 years old. The U.S. Department of Homeland Security certified Walter as being of National Interest to the United States and transferred him as a National Asset to the US on the same Visa as Albert Einstein and Winston Churchill. For 7 years Walter mitigated operational risk for the world's largest mutual fund of \$1.9 trillion. He was a contestant in the World Olympics in Informatics and has ranked as high as sixth fastest programmer in the world.

**Scorpion Computer Services** is a think tank of prodigies providing concierge "intelligence on demand" concierge services for family offices, and has helped over 500 startups and over 14 Billionaire clients making their dream projects a reality. Customers include Royal Families, the Global Fortune 100 companies in finance, utilities, healthcare, insurance, credit cards and government defense agencies. Scorpion solves funded challenges from designing a casino to creating an ecommerce company to automating a factory. What dream would you like us to make a reality?

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## Disclaimer

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