

Support Automation Competitive Differentiators

July 2005



Provision, Manage Profit: Be Empowered.

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INTRODUCTION – LETTER FROM THE CEO

Dear Valued Customer,

My name is John O’Keefe and I am the founder and CEO of Fine Point Technologies, Inc. I want to personally thank you for considering Fine Point Technologies as your subscriber management solution partner.

Since the day the company was founded in 1997, Fine Point Technologies has established a proven track record of success in delivering support automation solutions to our Service Provider customers. Our solutions have proven to not only reduce the technical support costs associated with acquiring and managing new subscribers, but also increasing profitability through the automated provisioning, configuration and management of new digital services.

Over the past eight years that we have been in business, Fine Point Technologies has deployed its solutions, via hundreds of service providers worldwide, to over ten million subscribers. Fine Point Technologies is unique in that its expertise extends far beyond industry proven self-installation, self-repair, and OSS service management solutions. Fine Point also delivers an unmatched focus on the end user subscriber, which allows service providers to deliver a superior “customer experience”.

This paper will discuss the highlights of the competitive differentiators of selecting Fine Point Technologies as your subscriber management partner.

Everyone here at Fine Point Technologies is looking forward to working with you to improve your subscriber support experience.

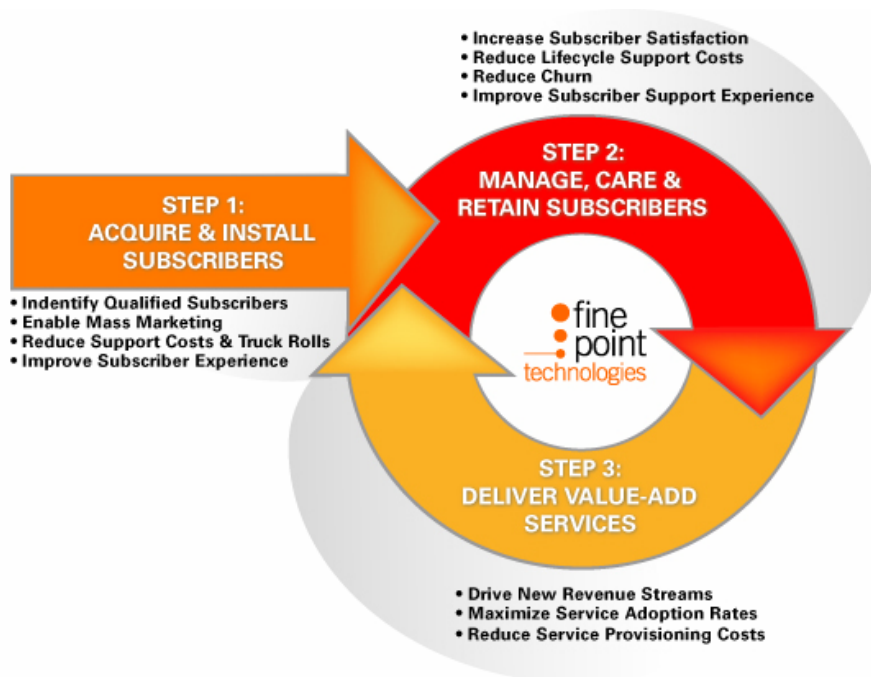
Thank you,

A handwritten signature in black ink, appearing to read "John O'Keefe".

John O’Keefe
Founder and CEO

OUR SUBSCRIBER MANAGEMENT VISION

The key to success for Digital Service Providers requires each step of the subscriber lifecycle be properly addressed. Only once each phase of the subscriber lifecycle is properly addressed can profitability through the delivery of value-add services be achieved. By evaluating your existing subscriber lifecycle management processes, Fine Point Technologies can reveal many areas where automation can significantly reduce support costs, increase subscriber satisfaction, and ultimately increase profitability.



This model is effective because Fine Point Technologies has an unmatched focus on the subscriber, and is at the starting point of Subscriber Management value chain. All facets of our solutions are focused on managing the subscriber experience, in order to maximize return and our solution's ultimate goal is to maximize subscriber satisfaction, increase your service revenues while reducing operational costs. This approach requires a thorough understanding of the drivers that contribute to the subscriber's current experience. This is accomplished by analyzing existing support processes and support center call drivers. Only then can solutions be tailored to deliver the desired message that service providers require.

Every touch point with the subscriber is paramount, and must be viewed as opportunity to deliver messages regarding brand, image, value and service. Experiential marketing is the greatest driver of customer perception. Ultimately, service providers are defining the value proposition that customers perceive they are receiving.

KEY IMPACTS OF FINE POINT'S SOLUTIONS

Superior Subscriber Experience & Satisfaction

Today's digital service provider market is competitive. Subscriber satisfaction and brand recognition is critical to success. That's why every aspect of our solutions is designed to ensure that your brand and service are delivered in a positive, reinforcing manner that delivers superior subscriber experience and improves subscriber satisfaction.

Reduced Support Costs

One of the most obvious impacts of our solutions is easily recognizable return-on-investment from the reduction of technical support and service administration costs. Our patent-pending technologies and solutions enable immediate, tangible return-on-investment by offering scalable support systems for all types of broadband service. By automating the support process, our solutions and technologies enable subscribers to self-repair common issues without contacting the help desk.

Improved Time-to-Market of Services

One major driver of success and profitability for Digital Service Providers is the ability to deliver rapid time-to-market for new digital services. Service Providers can not afford to be held up by integration and development times from their solution vendor. Our patent-pending technologies are key enablers for fast and efficient time to market. While other solution vendors may require up to twelve months or more for delivery of a fully integrated solution, Fine Point Technologies can provide fully localized, customized and integrated solutions in less than three months.

More Easily Enter New Markets

Our industry proven subscriber lifecycle management solutions build on our expertise in Internet service, subscriber experience and Internet technologies to help clients perform at the highest levels to deliver superior service for their subscribers and create sustainable value for their shareholders. Using our industry knowledge, service-offering expertise and technology capabilities, we develop solutions to help clients around the world to enter new digital service markets by:

- Increasing revenues in existing markets
- Improving operational support performance
- Delivering services more effectively and efficiently

A Partner You Can Trust

In order to ensure success in the future, your solution vendor must be there for you as your needs change. With over eight years of proven service and customer references, Fine Point Technologies is a partner you can trust and that will continue to be there with new and innovative solutions as your service evolves.

END-TO-END SUBSCRIBER MANAGEMENT SOLUTIONS

Through solutions that encompass the entire subscriber lifecycle from installation (Step 1) to service management (Step 3), Fine Point Technologies empowers Digital Service Providers to streamline their entire subscriber lifecycle management process. Our technologies empower Service Providers so that they no longer have to “roll trucks” or suffer from escalating support costs to activate new digital services. Our patent-pending technologies empower your service to cost effectively provision, manage, and profit from your subscribers. No other company offers such a broad range of technologies and solutions that address the entire subscriber lifecycle.

Through careful analysis of the support call drivers and existing subscriber experience, our expert Solution Architect engineer a solution that best meets the needs of your service. Our patent-pending technologies encompass the entire subscriber lifecycle your service to empower you to cost effectively provision, manage, and profit from your subscribers. No other company offers such a broad range of technologies.



Getting qualified subscribers in the door is just the beginning of the broadband provisioning challenge. Service providers must first attract them, install them, maintain them, satisfy them, and keep them coming back for more--in a highly competitive market, with minimal truck rolls, and without resulting in support calls.

A Fine Point Technologies broadband subscriber management solution empowers the entire subscriber lifecycle, from acquisition and qualification, through installing, managing, and self-repairing connectivity.

The key elements of the Fine Point Technologies broadband subscriber management solution include:

- Loop Qualification**
 Our mass-marketing and subscriber acquisition technologies enable the marketing and promotion of broadband services. These technologies are capable of qualifying the subscriber's copper loop for DSL service and enable the subscriber to sign-up in real-time for service.
- CPE Qualification**
 Our CPE qualification technology qualifies the subscriber's equipment (computer) for broadband service and repairs the CPE configuration to enable successful broadband installation.
- Universal Self-Installation**
 Our self-installation solutions guide subscribers through complicated installation process, manages CPE installation workflows, and automatically configures the desktop and CPE via TR-069 auto configuration technology.

- **Installation Diagnostics**
After installation our solutions perform “Installation Diagnostics” that help to reduce the common “Cannot Connect Issues”. Through connectivity tests and diagnostics on the broadband connection our installation solutions display Guided Resolutions to subscribers that enable them to troubleshoot self-repair connection issues without calling the help desk.
- **Service Verification & Activation**
Our solutions deliver value-add service verification, qualification and activation at the point of installation. This enables service providers to up sell “Triple Play” services or higher speed service by qualifying that their connection can support these services at the point of installation.
- **Automated Self-Repair**
Our self-repair technologies and solutions automatically resolve subscriber desktop configuration issues without the need for the subscriber to contact the help desk. Desktop issues are easily identified and quickly resolved with the simple click of a button!
- **Help Desk Management**
Our support automation solutions include complete help desk trouble ticketing management as well as “Chat” capabilities between the subscriber and help desk technician.
- **Help Desk Remote Interface**
Our help desk interface (trouble ticket reports) puts subscriber configuration and diagnostic data directly in front of the help desk technician. This interface will direct the subscriber on how to contact technical support for assistance and clearly identifies issues to the technician, drastically reducing call resolution time.
- **Service Diagnostics & Resolutions**
Our diagnostic technologies reduce the “Can not Connect” support call drivers by identifying and pinpointing problems with the broadband connection and service. Once a problem is identified, our solutions that display guided resolutions to the subscriber enable them to self-troubleshoot and self-repair these issues without the need to contact the help desk.
- **Remote Repair**
Our solutions offer the capability for help desk technicians to remotely repair the subscriber’s desktop. This eliminates the need for subscriber to follow complex support instructions and allows the technician to perform the repair for them, thus further reduces call resolution time.
- **Direct-to-Desktop Messaging (Bulletins)**
Targeted, direct-to-desktop messaging and software updates reduce support costs by providing proactively delivering service announcements to subscribers.
- **TR-069 Device Management**
TR-069 device management provides automated and remote management of CPE based devices as well the provisioning and management of CPE based value add services such as VPNs and firewalls.
- **WT-104 VoIP Management**
WT-104 VoIP device management provides automated provisioning and remote management of VoIP ATA CPEs as well the provisioning and remote management of VoIP services to these CPEs.
- **OSS Service Delivery & Assurance**
Fine Point Technologies offer a complete OSS service delivery and management solution that automates the provisioning and management of digital services. This solution provides complete service workflow management, automated service monitoring and assurance as well as a web portal for subscriber self-provisioning and management.

PATENT-PENDING TECHNOLOGIES DELIVER FLEXIBILITY

All of Fine Point Technologies solutions leverage our patent-pending technologies, enabling our solutions to be extremely flexible and modular. These technologies include:

- **RapiDeploy™ Intelligent Architecture** – An intelligent patent-pending software design philosophy which allows all of our solutions to be totally customizable without the complication of recompiling the source code.
- **Direct Plug-in Technology™** – A patent-pending technology that allows for simple integration with third-party CPE solutions and technologies.
- **SmartInstall™ Workflow Engine** – A patent-pending solution architecture that enables easy customization and optimization of installation and support workflows.
- **Direct Registration™ Technology** – A patent-pending technology that enables our solutions to easily integrate with back office billing and OSS systems.

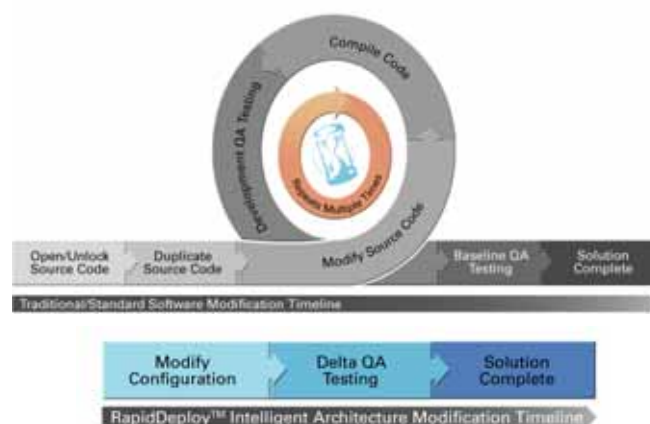
About Direct Plug-in Technology™...

As the industry continues to evolve, new technologies will emerge that will be beneficial your service. But how will your existing solutions integrate with these new technologies? All of Fine Point Technologies, Inc. solutions are built upon our patent-pending Direct Plug-in Technology™ that enables us to quickly and easily “plug-in” new features and third-party functionality without the complications of modifying source code. Most importantly this same technology enables us to easily enable or disable features in our products. Therefore, you can select the features and functionality that best meet the needs of your service.

About RapiDeploy Intelligent Architecture™...

Differentiating your service from that of the competition is critical to subscriber stickiness and loyalty. That is why your subscriber lifecycle management partner must be able to quickly and easily brand and customize their solutions to meet the needs of your service. To answer this call, Fine Point Technologies leverages its patent-pending RapiDeploy Intelligent Architecture™. This approach allows our solutions to be fully customized for your service in a fraction of the time it takes with other software vendors, enabling Fine Point Technologies to quickly brand, localize and configure your solution without modifying source code. This capability is critical in enabling quick time-to-market for your services.

All of our solutions are based on this RapiDeploy™ Intelligent Architecture. In order to better understand what RapiDeploy™ Intelligent Architecture is and how it works, we must look at the approach that a standard traditional software vendor or in-house development team takes and the process that they go through to customize and modify software solutions.



They accomplish this by first duplication of the source code specifically for you, the service provider, in addition to creating a copy for each and every one of their other customers. Their next step would entail

making programmatic changes and recompiling the source code. The solution then has to go through an exhaustive, base line quality assurance cycle which mandates that every feature of the solution be thoroughly retested and a new baseline be established. This development cycle is time consuming and repeats until the solution is completed. Worse yet, now the vendor has multiple copies of their source code base. When the time comes to add a new feature or resolve issues, they need to perform these changes repeatedly for each and every copy of the source code. This approach not only results in lengthy integration time, but requires large and expensive development teams.

With RapiDeploy™ Intelligent Architecture, Fine Point Technologies does not need to modify source code in order to localize, customize, brand, configure or “program the solution”. Instead, our solutions are entirely configurable through external files that can be quickly and easily modified. Therefore, the localization, customization, branding and configuration can be accomplished much quicker without the need for expensive software developers.

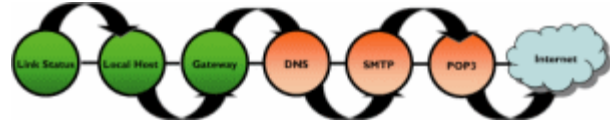
The Result: Improved Time to Market

The key result of these differentiators is “Time to Market”. While other vendors or in-house development teams can take up to 8 to 12 months for a fully integrated solution, Fine Point Technologies can reduce that down to as little as 2-3 months.

ADDRESSES “CAN NOT CONNECT” CALL DRIVERS

Other subscriber management solution providers promote “Web-based Installation” solutions that remotely provide support to the subscriber and their CPE. However 30 – 40% of the call drivers that come into the help desk during broadband installation are issues pertaining to the subscriber that “Cannot Connect”. Unfortunately in these situations, a web-based solution support solution provides no assistance simply because if the subscriber can not connect to your service, they can not connect to your support system. The subscriber is then left with no choice but to contact the help desk for support.

Fine Point Technologies’ subscriber management solutions are designed specifically to address connection related issues. Our solutions test the broadband connection in a logical manner in order to pinpoint any potential network connectivity failures. If a problem is detected with the broadband connection, an intelligent “Diagnostic Agent” provides easy-to-follow, guided resolutions to the subscriber that will assist them to resolve common connection problems. These step-by-step troubleshooting screens are fully customizable to match the existing call center resolution scripts and processes. Only after each of the suggested steps is followed is the subscriber directed to contact the help desk for further assistance.



A TRUE HELP-DESK PARTNER...

With new technologies, viruses, and operating system updates, industry change is inevitable. These changes can drastically affect help desk performance, call drivers and support costs. This is why your subscriber management vendor can not simply be a software vendor, but more of a partner that lives and breathes in your help desk and enables you to better adapt to a changing market place.

A critical part of all Fine Point Technologies solutions is our SupportPoint™ partnership that separates us from any other subscriber management solution vendor. While other vendors simply deliver a solution, Fine Point Technologies partners with our customer's help desk to continually improve and modify their service by analyzing the call driver results of and further optimizing the solution on a continual basis.

Our SupportPoint partnership delivers a one-on-one relationship with a dedicated project engineers and solution architects that participate with you in regular help desk reviews. This means that together with your help desk and product management and marketing teams, we analyze and review the results of the solution on continual basis to determine how it can be best optimized to further improve the achieved results.



Every aspect of the help desk results and call drivers are analyzed, enabling us to further optimize the support solution to improve the results or make recommendations of how new technologies may improve your service. With a SupportPoint Partnership, you will always access to Fine Point's ever growing list of functionality and new technologies.

This type of partnership is critical in today's market place. Issues such as operating system service packs, viruses, and third-party anti-spam, anti-spyware, and firewall software can drastically affect the help desk and subscriber experience. This partnership and our industry expertise ensure that any potential issues that affect the help desk can be addressed quickly, easily, and proactively.

SUBSCRIBER ADOPTION

Subscriber management solutions such as those from other solution providers were originally developed for the enterprise market. However, there are major differences in support solutions for the enterprise market and the requirements for broadband service that result in decreased subscriber adoption. Customer feedback is revealing that solutions from these solution providers have some of the lowest subscriber adoption rates in the industry resulting in up to four times the industry average for the number of support calls.

The Enterprise Approach

The key difference between the enterprise market and broadband service requirements is that in the enterprise market, the company deploying the support solution owns the desktop (the physical PC). Therefore the enterprise customer has the right and authority to remotely update, manage, inspect and monitor the desktop as they see fit. In the broadband service market, the subscriber, or end-user, owns the PC (CPE), not the service provider. Therefore, the “enterprise approach” taken by these companies creates negative affects that result in decreased subscriber adoption of the support solution. Ultimately if your subscribers do not use the automated support solution, your support costs will not be reduced.

Some of the issues created by the “Enterprise Approach” include:

- **“Continually Running” Software...** – Studies show that “continually running” support agent software that runs in the background not only affects system performance, but is also more likely to be uninstalled by the subscriber. There is a documented history of such applications interfering with normal user activity such as printing and Office applications. For examples of real world cases of subscriber dissatisfaction and issues with "continually running" software support agents see the following URL:

<http://www.finepoint.com/products/step2/srt/subscriber-complaints.htm>

- **Beware of “Sockets”** – Additionally, solutions from other solution providers are built upon a technology referred to as TCP Sockets that run on available ports on the subscriber’s computer. A “TCP Socket” is a software object that connects an application to a network protocol. This enables the program to receive TCP/IP messages from other applications via the Internet. Again, in an enterprise environment, this approach is acceptable; however for Internet service this creates a liability from a serious security risk.

Even if a socket-based product has been tested and put out in production worldwide, it still subject to hacker attacks. Vulnerabilities in socket/port-based applications are exposed by hacker utilities called “port scanners” which then end up as potential security breaches that can result in “ROOT ACCESS” to the servers. This requires that such services are fixed quickly, especially in services such as: FTP, SMTP, HTTP. Luckily, Microsoft and the UNIX community can repair these. The best example of this is the constant updates/fixes that are created for the many Internet “services” such as FTP, SMTP, HTTP (even those developed by Microsoft and the UNIX community). And it happens to even the best of them. In this example, AOL had a security breach in their Instant Messaging client that works identically in the manner described herein that is via Socket Technology:

<http://www.cnn.com/2002/TECH/ptech/01/02/aol.security/>

- **Desktop Privacy Issues** – The Enterprise approach to support automation enables the administrator, or in this case the service provider to remotely access the subscriber’s desktop, potentially without the subscriber watching or even knowing. This approach will raise serious privacy issues for the subscriber. It can also lead to potential liability for the service provider should data become compromised. Clearly this is not the best approach for Internet service based support automation.

The Fine Point Technologies Approach...

Unlike these solutions offered by other solution providers, Fine Point Technologies’ solutions are designed with subscriber usability in mind and maximize subscriber adoption. This is accomplished by:

- **“Subscriber Initiated” Support Agent** – Our support automation solutions are subscriber initiated which mean that they run only when needed and at the request of the subscriber. This approach ensures that the support agent is not “continually running” and is not using up precious computer resources.
- **Subscriber Monitored Remote Access** – The Fine Point Technologies support agent provides the help desk with remote access to the subscriber’s desktop. However, this access is provided with the verbal consent of the subscriber relayed by a secret access code to the support representative. The subscriber also monitors 100% of the activity and can disconnect the support representative at anytime. This helps to provide the subscriber with the confidence that their sensitive data will remain secure.
- **Not Socket Based** – Since our solutions do not leverage incoming TCP sockets, at no time is the subscriber’s desktop posed to security risks.
- **Designed for Novice Users** – Fine Point Technologies experience in the market has shown that end-user “adoption/acceptance” is directly proportional to ease in which the subscriber can utilize the solution (as opposed to calling the help desk). The design of our solutions adheres to *Fitts’s Law* (whereas the time to acquire a target is a function of the distance to and size of the target). Therefore, our solutions make self-support more easily accessible.
- **Continually Optimized to Increase subscriber Adoption** – A great deal of subscriber adoption has to do with the service and other facilities built around the service. Therefore, as part of our SupportPoint Partnership, your assigned Fine Point Technologies Integration Engineer lives in your helpdesk with you. This enables us to perform regular reviews the effectiveness of the support automation solution to pinpoint how subscriber are adopting the solution and identify methods and/or changes in the solution that will further increase this adoption.

SUPERIOR SUBSCRIBER EXPERIENCE

As the marketplace continues to become more and more dynamic with technology, the regulatory environment and customer expectations are changing at a faster pace than ever before. While the forces at work in our industry can not be controlled, you can have the power to control the most important element of your business. That is, the subscriber experience.

Subscriber experience delivers the best competitive advantage because it creates loyal customers, and loyal customers are likely to resist the offers of your competitors. Every interaction with a customer – internal or external – is a moment of truth. And the key aspect of every interaction is meeting or exceeding customer expectations. This is a key point in any interaction with a customer. That is, the “moment of truth” comes when the question is answered, “How have we produced the results our customer wanted and expected?”

Defining the desired customer experience is only part of the solution; service providers must make sure their organization has the tools and processes to make it a reality.

Other solution providers simply focus on the question “How does this affect the help desk?” without even thinking about the subscriber. Fine Point Technologies understands that subscriber experience is the key differentiator and a primary source of competitive advantage for your service. To help you maintain our edge on the competition, Fine Point Technologies examines each of your subscriber “touch points”, determining where changes in behavior and processes are required and then delivering solutions designed to leverage these touch-points, thus promoting a consistent, positive image of the brand. Our solutions are designed to assist even the most novice subscriber without the need for a help desk call, all while positively reinforcing the service brand image.



MODULARITY

Solutions from other solution providers have a “take it all or nothing” approach in regards to the features set of the solution. This can often result in higher solutions costs as service providers are forced to take features they don’t necessarily require. Fine Point Technologies’ solutions are designed to work flexibly with the complexities of broadband deployment and to cater specifically to each service provider. Service providers can “pick and choose” between the individual features and modules of our applications to create a totally customized solution that best meets the needs of their service.