Setting up a Wireless Internet Hot Spot Business on a Tight Budget

Fire4 Systems
Network Products for Public Internet Access

Introduction….

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This document was prepared as a 'how-to' guide to help a wireless Internet hot spot start-up business.

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Technology: unlimited vs. tight budgets

- If money is no problem then a wireless Internet hot spot provider can buy technology
  - **High performance full function wireless and router equipment**
    - Colubris, Proxim, Tropos, etc. ($1,000s/unit)
  - **Comprehensive software for billing and network management**
    - Alepo, IntraISP, Capterra ($10,000's)

- The secret to low budget wireless Internet hot spot provider survival is knowing how to buy low and get good deals
  - **Buy low cost hardware and install 3rd party firmware**
    - Senao, Compex, Ubiquiti (approx $100/unit)
  - **Don't buy billing and network management software**
    - Build your own software using free open source systems
    - Get software as a service and pay only when you make money

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Multi-expert skills are desirable

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- The wireless Internet hot spot provider-on-a-budget owner must be prepared to learn new skills and adapt to new situations

  - **Business: what types of wireless Internet hot spot provider opportunities are worthwhile: how to identify the best opportunities**

  - **Money: will a project make money and if so how much: what is the return on investment**

  - **Technical: find the best low-budget technologies**

  - **Marketing: how to identify and attract customers**

  - **Customer support: extremely important as satisfied customers give referrals**

  - **Maintenance: have a system in place to fix things fast and avoid losing money**

  - **Managing staff: businesses require staff to grow**

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Knowledge is the key to success

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- Spend time learning about the open source technologies that are used to build wireless Internet hot spot provider systems

- Open source technologies that you will need to learn
  - **Linux operating system: the platform for open source**
  - **Apache web server**
  - **Radius authentication server**
  - **SNMP device monitoring and management**
  - **Captive portal**
  - **SSL encryption**
  - **Scripting languages (Perl etc.)**

- Learn about free firmware for cheap wireless hardware
  - **OpenWRT, M0n0wall, Avansu, Locustworld**

Careful business analysis is required

- Analyze the wireless Internet hot spot provider business plan
  - **Get help to prepare a business plan if necessary**

- Clearly define the business model
  - **What services; to whom; when; where; how much**

- Study the economics of the business model
  - **Investment; operating costs; fixed vs. variable costs; profit analysis; cost to grow business**

- Prepare a cash flow spreadsheet to look at projections and test ideas
  - **Do the number make sense?, is the business a good idea?**
  - **If not then what can be done to make the business performance look good on paper**

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Define the business model

- A wireless Internet hot spot provider has many types of products/services that can be sold to customers
  - **Decisions are based on region, customer type, etc.**

- The business model describes how to do business
  - **What services will be offered?**
  - **How are the services delivered?**
  - **What products will be required to deliver services?**
  - **Will products be offered as part of service or separate?**
  - **How are services charged: one time, monthly?**
  - **Will customers be charged for installation?**
  - **Will same service be offered to all customers?**
  - **Will customized services be offered?**

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Fine tuning the business model

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- Wireless Internet hot spot providers have two basic business choices and can focus on one or develop both
  - **Subscriber business opportunity**
  - **Speculative business opportunity**

- Subscriber opportunity
  - **Providing a service as part of a contractual agreement**
  - **Cash flow can be projected with precision**
  - **Low risk with modest sales margin**

- Speculative opportunity
  - **Offer a service where a % of potential customers may use with an unknown frequency**
  - **Cash flow can only be approximately projected using historic data for each location**
  - **High risk with low to high margin sales**

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The subscriber opportunity

- The subscriber model provides a regular income for a fixed period (contract) by supplying wireless Internet access
  - **Customer might be a homestead requiring connection to the Internet via a wireless link**
  - **Customer might be a business that needs a wireless link between two offices: but no Internet**
  - **Customer might be a business that needs a wireless link to the Internet plus web site design and hosting**
  - **Etc.**

- Customers will pay monthly for different types of services during a fixed contract period
  - **Decide where to draw the line: list services offered to customers and list what will not be provided**

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The speculative opportunity

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- The wireless Internet hot spot business provides a service that customers may use sporadically
  - **Wireless Internet hot spot opportunity at a public area (airport) where the customer might pay hourly for Internet access**
  - **Wireless links for special events such as trade shows that exhibitors might use during the show**
  - **Etc.**

- Each opportunity is a risk
  - **Spend as little as possible to offer the service**
  - **Be prepared to pull out if expectations are not met**

- Minimize the cost of testing/developing opportunities
  - **Develop a 'portable-wireless-kit' approach that can be set up and taken down quickly**

Subscriber vs. speculative opportunities

- Subscriber pros and cons
  - **Medium term income guarantee but modest margins**
  - **Subscribers are extremely valuable in the long term if the exit strategy is to sell the business**

- Speculative pros and cons
  - **A risk investment has to be made to offer a service without any customer commitment**
  - **Select the location very carefully: income opportunities vary widely**
  - **'Monopolies' at busy locations give high returns: airports, marinas, resorts, etc.**

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Economics of the wireless Internet hot spot provider business

- Money flows out of the wireless Internet hot spot provider business in three ways
  - **Capital investment**
  - **Fixed operating cost**
  - **Variable operating cost**

- Capital investment can be minimized with the right plan

- Fixed operating costs should be avoided or minimized wherever possible

- Variable operating costs means that money only flows out when a larger amount of money flows in

- Money flows in from two types of income opportunity
  - **Fixed term/price agreements**
  - **Variable revenue sources**

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Sources of income

- Characteristics of fixed term/price agreements
  - **Income derived from last mile subscribers**
  - **Upside: subscriber value improves business worth**
  - **Downside: modest margins due to competition**

- Variable revenue sources
  - **Income derived from hot-spots etc.**
  - **Upside: can produce excellent financial results**
  - **Downside: high risk, requires very careful analysis**

- Other wireless Internet hot spot provider income sources
  - **Operating wireless data links for businesses**
    - Fixed term/price but can be quite profitable
  - **Maintenance contracts for business telecom**
    - Competitive segment but profitable

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Managing expenses

- Work from home initially
  - **Avoid office lease and installation costs**

- Never purchase equipment for customer opportunities where ROI is long term and requires contract completion
  - **Always cover the equipment cost with 'installation services'**
  - **Or arrange for a customer equipment lease; banks can advise about this**

- Avoid buying expensive test equipment
  - **Cheap notebook computers with shareware software will cover 95% of testing requirements**

- Don't buy business /network management software
  - **Use shareware or software as a service (SaaS)**

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Managing fixed costs

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- Work from home initially
  - **Avoid office lease and installation costs**

- Avoid paying for advertising
  - **Network with people: word of mouth**
  - **Build a good web site: learn how to get a high Google ranking**
  - **Write a blog: share your knowledge, attract customers**

- Don't hire full time people initially
  - **Find people who will work hourly**

- Avoid making fixed term Telco agreements and agreements that have a cancellation fee
  - **Shop around to find flexible backhaul providers**

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Managing variable costs

- Deliver customer solutions with expenses that disappear if the customer stops paying
  - **Telco contracts that can be cancelled**
  - **Equipment that can be reused with other customers**
  - **Antenna site fees that can be terminated anytime**

- Hire people per job
  - **Collect from the customer and then pay wages**

- Negotiate up front partial payment from customers
  - **Cover out of pocket expenses**

- Negotiate payment to vendors based on receivables schedule
  - **Avoid out of pocket expenses**

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Profits

- Profit calculation: ensure <u>all</u> costs are included
  - **Profit = sales - costs**

- Sales
  - **Subscriber fees**
  - **Customer invoices per job**
  - **Over the counter sales of products, accessories**

- Costs
  - **Amortization of capital expense (with interest)**
  - **Fixed operating cost**
  - **Variable operating cost**
  - **Cost to grow business (reserve for investment)**
  - **Owners salary**

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Financial planning

- A spreadsheet for projected cash flow is important
  - Include all cost items and sales month by month
  - Make spreadsheet adjustments month by month to reflect actual business conditions
  - Plot the profit/loss month by month
  - Identify high profit sales
  - Identify low profit /money loosing sales

- Make decisions about the business direction
  - Analyze month by month results
  - Focus on high margin business, avoid low margin work
  - Use the spreadsheet to experiment with scenarios and evaluate projected returns: price adjustment etc.

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Wireless Internet hot spot provider network management software

- Several software companies produce wireless Internet hot spot provider management software for network operations management: essential features are…..

  - **Customizable log in screens and customer interfaces**
  - **Customer billing via: access code, scratch cards, credit card, monthly subscriber billing, wholesale billing**
  - **Login page disclaimer with conditions of use**
  - **Login page banner advertising and banner management**
  - **Traffic shaping to ensure optimum resource sharing**
  - **Traffic flow control determined by billing model**
  - **Equipment failure monitoring with auto trouble ticket**
  - **Remote management of wireless and router devices from the network operations center**
  - **Traffic statistics and billing reports with billing data export for book keeping applications: Quickbooks**

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Software features: customization

- Install the wireless Internet hot spot provider business 'look and feel' in all network equipment customer interfaces

  - **Wireless Internet hot spot provider / wireless Internet hot spot operator web site**
  - **Login interface screen (splash page) with the wireless Internet hot spot provider graphic design**
  - **Splash page click-through to the wireless Internet hot spot provider Web site**
  - **Disclaimer notice**
  - **On-line information (manual, FAQ)**
  - **Authentication code entry**
  - **Credit card data entry**
  - **Customer error messages**
  - **Customer support request**
  - **Customer targeted advertising**

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Software features: customer billing

- Billing options permit testing and deployment of different customer billing strategies

  - **Access code generator with a file format that can be printed via standard software**
  - **Off the shelf scratch cards available with time options**
  - **Ability to generate custom scratch cards (wireless Internet hot spot provider graphic design + custom time options)**
  - **Credit card billing with options to use different CC processors (authorize.net + PayPal®)**
  - **Monthly/quarterly account billing for contract customers**
  - **Control bandwidth via billing to offer 'basic' and 'premium' services**
  - **Wholesale billing for business customers**
  - **Report generated for usage (statistics)**
  - **Report generated for sales processed (financial)**

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Software features: login disclaimer

- When providing public services there are liability issues where responsibilities must be declared

  - **All customers must acknowledge the terms and conditions of use drafted by the wireless Internet hot spot provider by clicking the 'I accept' button**

  - **Downloading of copyright materials is illegal and the RIAA will sue: customers cannot be prevented doing this but the wireless Internet hot spot provider must advise customers that this is not permitted under the terms and conditions**

  - **Advise also that the use of the wireless network to capture information transmitted by users is illegal – hackers may try to access passwords and other information**

  - **Seek attorney's advice when drafting disclaimer**

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Software features: banner advertising

- Banner advertising placed on the login page is a source of income for the wireless Internet hot spot provider

  - **Prepare banners centrally and distribute to all devices in the wireless Internet hot spot provider network**
  - **Configure banners for individual devices, groups of devices and globally**
  - **Banner login page options include click-through and non click-through (charge different rates)**
  - **Banner updates should be immediately viewed by customers on new login screen**
  - **Timer available for free wireless Internet hot spot applications when the customer can be logged out after a programmed time to force repeat viewing of the banners**

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Software features: traffic shaping

- Traffic shaping is tied to billing rates and also prevents users who transfer large files to cause a slow down for all other users of the same access point or Internet circuit

  - **Offer price/performance points for customers: 'basic' service bandwidth limited, 'premium' full bandwidth service**
  - **Prevent a user who is downloading MP3's or video files to 'hog' the network**
  - **Identify data volume transferred by each user**
  - **Set breakpoints of data volumes to determine bandwidth priorities**
  - **When a user has transferred up to the first predetermined limit of bytes then bandwidth priority is lowered and file transfer slows for that user**
  - **File transfer becomes much slower as other data volume break points are reached**

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Software features: failure monitoring

- It is extremely important that the wireless Internet hot spot provider network manager is informed as soon as a network device failure occurs to minimize loss of income and avoid angry customers

  - **Automate trouble ticket generation on the failure of any device or circuit**
  - **Management system should constantly monitor status of network components via SNMP (simple network management protocol)**
  - **System should send trouble ticket email to network manager advising of outage**
  - **System should send repair work order to field technician via cell phone text message**
  - **Automated call center message to inform customer that outage is temporary and that repair is taking place**

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Software features: redundant systems

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- Ideal wireless Internet hot spot provider management system supports low cost hardware so that redundant system can be built

  – **Installation cost for two devices is almost the same as for 1 device (wireless access points)**

  – **Configure redundant equipment for 'hot-standby' so that the network manager can activate locally or remotely**

  – **Network manager responds to device failure alarm by activating redundant device at the same location.**

  – **Technician can repair failed device while backup device continues to provide service**

  – **When paying for node management, ensure that one device charge only is made for redundant installation, and that charge can be swapped from failed to standby device**

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Software features: remote management

- A single wireless Internet hot spot is easily managed by connecting a computer to the device

- A wireless Internet hot spot provider network with multiple devices in multiple locations requires remote device management permitting central management from the network operations center

  - **Devices support SNMP to permit remote management including configuration of important parameters**
  - **Central database of configuration files for all devices in the wireless Internet hot spot provider network**
  - **Device independent configuration files permit device to be replaced with different type but use same configure file**
  - **Facility to lock down device parameters which can take the device off line when modified remotely**

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Software features: statistics reporting

- Network planning requires information about the current usage of the network, and historic network usage

  - **Extract data traffic info from any device in the network**
  - **Define device groups, then access traffic info for the group**
  - **Extract time-varying information for individual devices and for groups of devices**
  - **Network device stats should measure the % utilization of devices and circuits so that points where capacity is exceeded can be identified quickly**
  - **Information files should be downloadable in common formats for loading into a spreadsheet to permit advanced report generation**

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Software features: billing reporting

- Billing reports are essential for the wireless Internet hot spot providers business to provide input for book keeping and accounting software

  – **Examine data for individual devices, or for groups of devices**

  – **Download access code billing data for any device or group in the network**

  – **Access credit card billing data for any device or group in the network**

  – **Download credit card billing reports for verification against credit card processors statements**

  – **Download comprehensive billing reports in a format that can be used as input into book keeping software, such as Quickbooks**

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Software features: access code reporting

- Each access code initiates a billing process when entered by a customer so it is essential that the use of each access code can be verified

  – **Access code usage report with date(s), time(s), location of usage, device that validated the access code and current status of the access code**
  – **Generate report for customer who questions usage of access code or claims that access code was not used**
  – **Verification of suspected billing fraud at any site**
  – **Access code usage provides additional input for network planning process – for example, identify codes that were purchased at one site but used at another site**

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Wireless Internet hot spot provider management tools summary

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- **Avansu: wireless Internet hot spot provider network billing, monitoring and management**
  - **Details at www.avansu.com**

- **Alepo: OSS/BSS solutions for Public Wireless LAN providers**
  - **Details at http://www.alepo.com/**

- **IntraISP: Billing, CRM, and OSS for Broadband Service Providers**
  - **Details at https://www.intraisp.com/**

- **Capterra: OSS system includes provisioning, workflow and customer care for WISps**
  - **Details at http://www.capterra.com**

- **Intrameta: Broadband operations support system BOSS**
  - **Details at http://intrameta.com/**

- **Powercode: ISP billing and network management**
  - **Details at http://www.powercode.com/**

- **All City Wireless: Turn-key wireless network management**
  - **Details at http://www.allcity-wireless.com**

- **Wireless Orbit: ISP network management and billing solution**
  - **Details at http://www.wirelessorbit.com**

Wireless Internet hot spot provider network building blocks

- wireless Internet hot spot providers use several different components to build out networks: all devices should have the characteristics described in the previous section

  - **Wireless access points: short/long range, indoor/outdoor (2.4GHz operation)**
  - **Multi-port routers for wired applications (e.g. hotel rooms)**
  - **Wireless repeaters with multipoint local access (2.4GHz) and backhaul (5GHz) to central antenna**
  - **Point to point wireless links (900MHz and 5GHz bands)**

- The wireless Internet hot spot provider may also require equipment for additional services
  - **Server for customer email service, etc.**

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ISM unlicensed frequency bands

- Wireless Internet hot spot provider wireless equipment uses unlicensed ISM bands
  - **Customer facing access points are always 2.4GHz for laptop access: access points are point to multipoint configuration**
  - **Point to point wireless links use the 5GHz frequency bands, with up to 54Mb/s bandwidth, however for line of sight ONLY**
  - **Point to point wireless links can use the 900MHz frequency bands, with 2-11Mb/s bandwidth, NEAR line of sight**
  - **Wireless repeaters use 2.4GHz for local access and 5GHz for backhaul to central transmitter**

- WIMAX may also be used for licensed or unlicensed point to multipoint distribution

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Functionality of wireless Internet hot spot provider equipment

- Wireless Internet hot spot provider equipment is generally very expensive due to the complex functionality and small volume market
  - **Suppliers: Cisco, Colubris, Tropos, Proxim, etc**
  - **Carrier grade equipment in the price range $1000 to $5000 depending on functionality and redundancy**

- Low cost equipment can be used with 3rd party software by the wireless Internet hot spot provider with a tight budget
  - **Suppliers: Ubiquiti, Engenius**
  - **Equipment price range $50 to $200**

- 3rd party firmware can be downloaded onto budget hardware to add wireless Internet hot spot provider functionality
  - **OpenWRT, DD-wrt, Avansu**

- Redundancy can be built by duplicating budget hardware

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Equipment hardware configurations

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- Select the correct equipment configurations for each application
  - **Multi-port router configuration**
  - **Point to point wireless with high gain antenna**
  - **Long range point to multipoint (wireless Internet hot spot) configuration**
  - **High bandwidth point to multi-point configuration**
  - **Full duplex wireless repeater configuration**

- Point to point issues
  - **High antenna gain transmits further, however very high gain antennas are difficult to align**

- Point to multipoint issues
  - **Radio technology is limited to 20 to 70 concurrent users depending on equipment performance: for more users multiple radios are required**
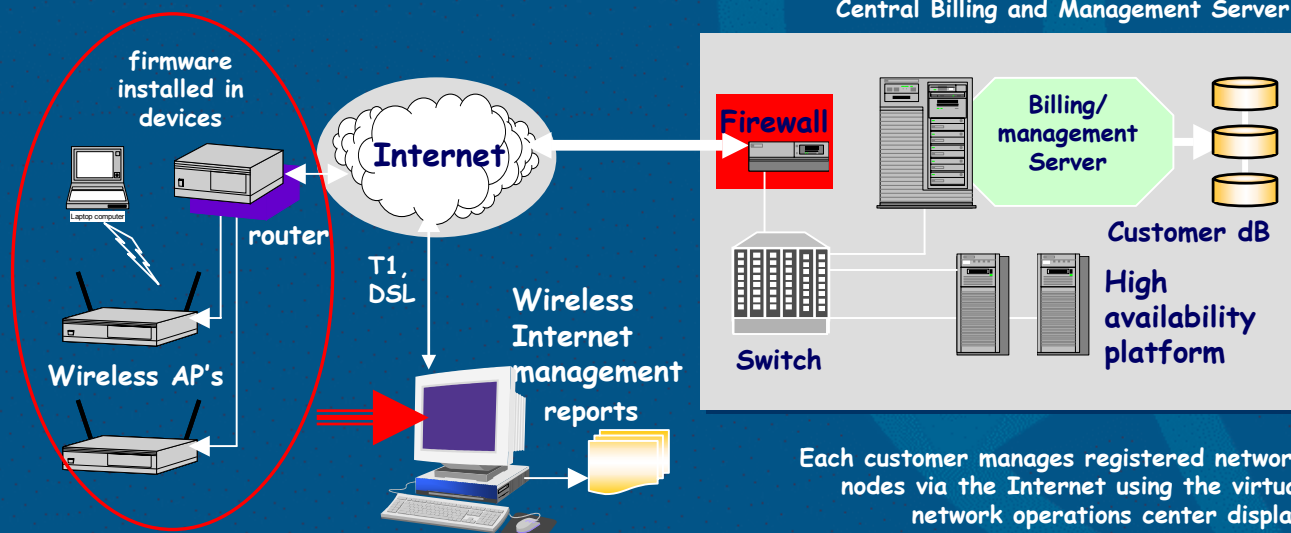
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Multi-location wireless Internet hot spot management system

- All devices (routers and wireless access points) owned by the wireless Internet hot spot provider are managed from the providers computer
  - **Each account holder has access to a comprehensive suite of billing and management functions**

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firmware installed in devices

Laptop computer

router

Internet

T1, DSL

Wireless AP's

Wireless Internet management reports

Firewall

Central Billing and Management Server

Billing/ management Server

Customer dB

High availability platform

Switch

Each customer manages registered network nodes via the Internet using the virtual network operations center display

Applications for wireless Internet hot spots

- Wireless Internet hot spots are for travelers, vacationers, and visitors
  - **Resort: wireless, kiosks, wired rooms**
  - **Hotel: wired rooms, wireless for conference areas, business center with computers/printers**
  - **Trade show: wireless for exhibitors and visitors, wired booths, kiosks**
  - **Marina: wireless internet**
  - **Internet cafe: wired kiosks, wireless for laptops**
  - **RV park: wireless Internet**
  - **Airport: wireless for laptops, kiosks**

- Some locations make less money in sales but may benefit from providing free access with advertising
  - **Bookstore, restaurant, coffee bar, golf club**

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Potential wireless Internet hot spot cash flow

- The amount of money that can be made depends on several factors
  - **Technology awareness of potential users**
  - **Users urgency to access information**
  - **Users willingness to spend money + economic level**
  - **Volume of potential customers + seasonality**

- Locations that generate good cash flow (estimates)
  - **Airport: $100,000/month**
  - **Trade show with 250 booths: $25,000/show**
  - **Resort: $20,000/month**
  - **Internet café: $5,000/month**
  - **Marina: $5,000/month**

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Coffee bar wireless Internet hot spot: requirements

- A small wireless Internet hot spot deployment example
  - **Coffee bar, customer area is 1500 ft sq.**

- One medium range access point with a built in 8dBi patch antenna is required with billing software installed
  - **Equipment cost: $200**
  - **The access point is powered via the Ethernet cable (PoE): makes wiring easy**

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- The access point is connected to the ADSL router
  - **Monthly cost for business DSL: $75/month**

- Sell pre-pay 6-hour open scratch cards to customers
  - **Cost: 75c each, retail for $7.50 each (example)**

Coffee bar wireless Internet hot spot: ROI

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- Investment and operating costs
  - **Equipment: $200**
  - **Billing system account: $20/month**
  - **Resell 6h scratch cards: cost 75c, retail $7.50**
  - **Internet DSL: $75/month (share with other equipment)**
  - **Maintenance $0, customer support: $0**

- For 20 customers/month, income
  - **Net; $60/month, payback on investment < 3.5 months**

- For 100 customers/month, income
  - **Net; $600/month, payback on investment < 2 weeks**

- For 500 customers/month, income
  - **Net; $3300/month, payback on investment < 2 days**

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Resort wireless Internet hot spot: requirements

- Full service resort with 20 acre campus
  - **Provide wireless Internet access for: 4 miles of beaches, 2 pools, 3 restaurants, 4 bars, 1 theater, business center, indoor public games area, outdoor public games area, reception area, guest apartments (wired), staff apartments (wired)**

- Important requirement
  - **The network manager must be informed immediately if any equipment fails**
  - **Network manager needs remote configuration accessed from any location with Internet**
  - **Customization of login pages and scratch cards**

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Resort wireless Internet hot spot: equipment

- Equipment
  - **3 routers for wired staff and guest apartments and business center computers**
  - **3 high power long range access points with sector antennas, mounted on a tower for beach and outdoor public area**
  - **12 medium range indoor/outdoor access points with integral patch antennas for other areas**

- Wireless Internet hot spot provider management software
  - **Billing via access codes, scratch cards and credit cards**
  - **Alarm monitoring of all equipment + repair dispatch**
  - **Remote management from head office and offsite**

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Resort wireless Internet hot spot ROI

- Total investment: equipment, installation and training
  - **$38,500**

- Monthly operating costs: support, maintenance
  - **$4,000**

- Customer charge
  - **Optional $50/week extra: 15% of customers purchase**

- Monthly gross sales
  - **$20,000 : 400 customers/month**

- Monthly net income
  - **$16,000**

- Time for payback on investment
  - **2.5 months**

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Managing wireless Internet hot spots across multiple sites

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- A business that has multiple sites can operate a wireless Internet hot spot at each site but manage the system as one large multi-site wireless Internet hot spot
  - **See Avansu specifications**

- Use wireless Internet hot spot management software that permits network equipment to be managed individually or in groups
  - **Track performance of devices**
  - **Track performance of device groups**

- Overall operating costs can be reduced for multiple sites
  - **One customer support line for all sites**
  - **Central maintenance coordination**
  - **Central updating of devices at remote sites simultaneously**

Wireless Internet hot spot accounting and reports

- Wireless Internet hot spot management software packages reporting

    - **Node (device) traffic stats**
    - **Node (device) billing record**
    - **Node (device) credit card processing record**
    - **Device group traffic stats**
    - **Device group billing record**
    - **Device group credit card processing record**
    - **Download billing/CC reports as CSV files, import into applications like Excel and Quickbooks**
    - **Access code verification report**
    - **Network inventory (graphical)**
    - **Node configuration report**

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Wireless Internet hot spot installation schedule

- A small installation like a coffee bar will take 1 hour
    - **Time will be saved by using equipment that is powered over the Ethernet cable (PoE): avoids having to run power to the location of the access point: access point is placed in a good location for the antenna**

- A large installation like the resort example might take 1 month to install: there are many tasks
    - **Install long range wireless equipment on a mast and medium range equipment at each location**
    - **Run cat-5 cable from the server room to all equipment**
    - **Staff training to sell Internet, and answer questions**
    - **Train customer technical support staff**

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Deploying and evaluating the wireless Internet hot spot

- Start small with the minimum investment

  - **Learn how the technology works**
  - **Learn how to support customers**
  - **Test different Internet selling strategies**
  - **Talk to customers and get feedback of the service**
  - **How many customers will use the Internet/month?**
  - **Analyze the financial results, cost, sales, profit**
  - **Is the wireless Internet hot spot system reliable?**
  - **Is system performance adequate (any complaints)?**

- Verify the results against initial expectations

- Expand carefully, test and verify at every step

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Growing wireless Internet hot spot sales

- Wireless Internet hot spot income is limited by the number of customers who want Internet access
  - **What % of total customers use the Internet?**
  - **Offer a free trial to increase this %**

- Will local companies want to advertise to your customers
  - **Sell hot-spot banner advertising**

- Sell computer accessories to wireless Internet hot spot users
  - **Laptop wireless USB device: wholesale $10, retail $25**
  - **USB storage device: wholesale $5, retail $15**

- Sell additional services to wireless Internet hot spot users
  - **Access to a printer; charge per page printed**
  - **Offer a photo printing service**

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Finding 'goldmine' niches

- There are a few opportunities where wireless Internet hot spot providers have made a great deal of money: characteristics of the goldmine opportunity are …

  - **Locations with high numbers of people in constant turnover: e.g. airport**
  - **Locations where Internet access is extremely important for customers: travelers checking itineraries: business people planning meetings**
  - **'Monopoly status' is required: hold an exclusive concession to provide Internet service**
  - **Locations where additional income can be derived from login page advertising of local businesses**
  - **Locations where customers understand computer technology to minimize support costs**

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Strategies to acquire a 'goldmine'

- The best locations are owned by big businesses/govt.
  - **Big businesses are slow to launch new technologies so welcome a wireless Internet hot spot provider**

- The best locations are:
  - **#1: airport: $100K to $250K /month**
  - **#2: busy trade show venue: $20K to $100K /month**
  - **#3: all inclusive resort: $5K to $20K /month**

- The opportunity is obtained by negotiating with the business owner to provide <u>exclusive</u> wireless Internet hot spot service
  - **The wireless Internet hot spot provider covers all costs of the installation and all operating costs: business owner has no cost**
  - **The wireless Internet hot spot provider gives a percentage of sales to the business owner – after recovering the initial investment**

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'Goldmines' are risky: homework required

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- Spend a lot of time at the chosen site gathering data before speaking with the business owner
  - **Acquire as much data as possible about customer volumes, customer types, demand for the service, advertising opportunities, etc.**

- Calculate very carefully what the installation and operating costs will be
  - **A big part of the install cost is the wireless Internet hot spot providers labor, remember that permits must be pulled (additional cost/time) and union rules obeyed (higher wages)**

- With a good plan wireless Internet hot spot providers can get payback on the entire installation investment cost very quickly
  - **Fastest we have seen was <u>2 weeks</u>**

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Customer support requirements

- Customer support is essential for all wireless Internet hot spot providers
  - **If the customer can't connect his computer to the Internet then it is the wireless Internet hot spot providers problem**

- Must have telephone support
  - **1-800 number with trained support technician**
  - **Depending on quality of service agreement with customer, wireless Internet hot spot provider may have to provide support 24/7**
  - **Support can be outsourced to specialist company**

- Make repairs quickly
  - **Have fault detection plus automated trouble ticket**

- Install redundant equipment
  - **Have hot standby equipment that can be activated on failure of production equipment**

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Good customer support generates sales

- All subscriber agreements have some quality of service component
  - **If QoS is not met then customer can cancel contract**

- If wireless Internet hot spot customer can't connect the laptop then the customer will not purchase airtime
  - **Biggest wireless Internet hot spot support issue currently is Windows Vista: the hot spot wireless Internet hot spot provider must have a Vista specialist to explain Vista wireless network security configuration**

- Mediocre support will drive customers to competitors
  - **Customers inability to use the service quickly is a deal breaker**

- Good customer support generates referrals

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Good customer support is a selling point

- All wireless Internet hot spot providers can capture customers from competitors by offering better support
  - **Sales support**
  - **After sales service support**

- A happy customer will buy more services and give more referrals
  - **Your customer is your best sales person**

- Give special deals to long term customer to avoid 'churn' (customers defection to competitors)
  - **Have the support person do more then just answer questions**
  - **Proactive support means calling on your best customers to offer sweet deals, discounts, etc.**

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Strategies for business growth

- A successful business will grow until your exit strategy is reached
  - **Don't just create a job: create an investment**

- Business growth will only happen when certain conditions are met
  - **Customers are happy because tech support solves all their problems and the network never breaks**
  - **The business is generating sufficient profits to pay the costs of growth**
  - **Employees are happy with their working environment and stay for the long term to grow with the company**
  - **The wireless Internet hot spot provider hires bright people to implement the growth plans**

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Business growth through acquisition

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- A startup wireless Internet hot spot provider will develop sales in a limited geographic region for a number of reasons
  - **The wireless Internet hot spot provider owner knows potential customer personally and understands the needs of potential customers**
  - **The wireless Internet hot spot provider owner knows the topography and can quickly plan wireless links**

- Eventually the wireless Internet hot spot provider will grow to the point where the chosen region is saturated: the only way forward is to grow geographically
  - **The wireless Internet hot spot provider is immediately at a disadvantage: geographic growth will be much more expensive**

- The first step to geographic growth should be to look for competitors that could be acquired: cheaper long-term

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Sales and marketing strategies

- Minimize marketing and selling costs with creativity
  - **Carefully monitor the cost to acquire customers as this is an investment that must be amortized during the contract period**

- Potential subscribers can be easily identified
  - **Homesteads outside the range of DSL**
  - **Businesses that have multiple sites, etc.**

- Personal contact is your most valuable sales tool
  - **Make an appointment to visit potential customers to present the advantages of your service**

- 100 subscribers will be the start of a successful business
  - **3 to 6 months of visiting potential customers**

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Sales and marketing materials

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- Communicate clearly and simply with potential customers
  - **Describe the benefits**
  - **Describe the costs**
  - **How is your offer better then the competition**
  - **Describe special time limited deals**

- Put your message into print (flyer, brochure) for mailing and leave a copy with the customer after a visit
  - **Use the skills of a graphic designer to make your material look professional**
  - **The image you project is very important to win customers**

- Ensure that all sales materials are always available
  - **Sales contracts, support forms, referral forms, etc.**

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Sales and marketing via the Internet

- Your Web site will project your image
  - **Your potential customers already surf the Web and have seen many professionally produced web sites**
  - **Spend the time to build a functional web site, pay a design professional to make it look good**
  - **When money is tight buy a good template ($150)**

- Your Web site is an important sales and marketing tool: can customers……
  - **Purchase services on line?**
  - **Get support on line?**
  - **Seek referral commissions on line?**
  - **See new products and services on line?**
  - **Upgrade/downgrade services on line?**

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Exit strategies

- It might seem strange that a presentation on starting a business should include the exit strategy (selling the business)

- This presentation has described planning and delivering the products and services that will help you grow your business

- The eventual results you get from your business are also very important, there are several options
  - **Create a family heirloom: father/mother to son/daughter**
  - **Sell out to a competitor**
  - **Take the company public: IPO**

- It is important to decide now because your decision will influence what you do

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Exit strategy: business sale examples

- Telcos buy wireless Internet hot spot provider businesses to acquire the subscribers
  - **The wireless Internet hot spot provider owner has built economies of scale through hard work and is now a fit for the Telco economic model**

- Competitors will buy a wireless Internet hot spot provider businesses to expand
  - **Competitors look for profitable businesses with high growth that will add value to their bottom line**

- Service businesses that seek to expand into high tech areas will buy wireless Internet hot spot providers
  - **A farm supply company might buy a rural wireless Internet hot spot provider to access Internet know how and also expand the wireless Internet hot spot providers network to their client base to increase revenue**

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Products for public Internet networks:

Fire4 Systems Inc. – www.fire4.com
Tel: 305-558-8773

Hospitality industry public Internet solutions

Hospitality Internet Solutions – www.hospitality-internet.com
Tel: 305-394-6333

OEM software customers – www.avansu.com

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62