

# HorizonlessTours

*every place has a story to tell...*



## **Business Plan**

**12/2/2004**

Pankaj Agrawal

Brad Hahn

Aaron Roth

Scott Semrad

COPY \_\_\_\_ OF \_\_\_\_

# Table of Contents

Executive Summary .....	3
Company Overview .....	4
Opportunity .....	4
Product and Service .....	5
Industry and Market Analysis.....	7
Marketing Plan.....	9
Operations Plan.....	13
Development Plan .....	14
Management.....	15
Competitive Advantage.....	17
Financial Plan.....	18
Offering.....	20
Appendices.....	21

---

## EXECUTIVE SUMMARY

---

### Opportunity

The National Park Service (NPS) has a mission to educate visitors through interpretive content on the natural and cultural resources of parks. In July 2003, the NPS completed research that concluded park visitors “increasingly want portable, mobile, information that goes through the park with them.”<sup>1</sup> However, the NPS is technically and fiscally unable to meet this need as the average park unit is under funded 25-45%, with “Interpretation” identified as one of the top 5 budget shortfall areas.<sup>2</sup>

### Solution

Horizonless Tours meets this need with the e-Ranger, a multimedia tour delivered through a mobile device available for rent to park visitors for the duration of their visit. The e-Ranger utilizes the latest in technology to deliver location-relevant content when and where the visitor wants it, whether on foot or in their vehicle.

### Value Proposition

Our customers have traveled long distances and invested significant energy to experience a National Park. The e-Ranger provides content on the culture, flora, fauna, and historical resources of the park based on the customer’s interests and location, so they have a more enriching, rewarding, and emotionally engaging experience—all for a small incremental cost to their visit. For our customers, it’s just like having a friendly and knowledgeable ranger travel the park with them.

### Competitive Advantage

Horizonless Tours is developing exclusive NPS partnership arrangements to begin offering the e-Ranger service to park visitors in 2005. Once Horizonless has established a presence inside a park, competitors are essentially be locked out. Additionally, Horizonless Tours is developing a proprietary content management system that will result in unrivaled speed of deployment when launching service in new parks.

### Financials

Horizonless Tours generates revenue from per-day rental fees and incurs costs of goods sold through royalties, transaction fees, and hardware replacement. Gross margins stabilize at ~60% in year 5 with net earnings of ~15% on around \$9M in revenue. Horizonless Tours will break even in year 2 and will be profitable and cash flow positive in year 3. The company requires \$700K of investment during year 1 to achieve these milestones.

### Management

The Horizonless leadership team features dedicated individuals from the recreation, multimedia, and technology industries as well as a board of advisors with experience in National Parks, management and entrepreneurship.

---

<sup>1</sup> NPS Social Science Group

<sup>2</sup> NPS Business Plan Initiative

---

## COMPANY OVERVIEW

---

### Introduction

Horizonless Tours is a Boulder, Colorado based company that offers mobile multimedia touring devices. The company's first venture is a rental service of the e-Ranger, a handheld electronic device that delivers educational "guided" tours of National Parks.

### Mission Statement

Horizonless Tours utilizes the latest in technology to deliver relevant, educational and engaging tours.

### History and Current Status

Horizonless Tours is currently composed of the four company founders, all graduate students at the University of Colorado. Thorough product development and business feasibility studies have been conducted. The founders have initiated discussions with National Park Service (NPS) regional offices as well as park superintendents in an effort to establish a relationship and identify a pilot park.

---

## OPPORTUNITY

---

Last year, there were 265 million recreational visits to National Parks in the United States. When visiting a park, many tourists seek detailed cultural, historical, and natural resource information, defined as "interpretative media" by the park service. The Park Service has this mission to educate visitors, but is finding it increasingly difficult to do so due to dwindling budgets and increasing costs.

The average National Park is under funded 25-45% and "interpretation", is typically in the top 5 needs of parks.<sup>3</sup>

Furthermore, the National Park Service's strategy is evolving from costly in-person ranger tours to more automated and cost effective interpretive mediums such as videos, recordings, placards, and waysides. In our conversations with 7 different NPS superintendents, five said they were definitely interested and two would probably be interested in seeing electronic tours at their park.



**Glacier National Park**

"Visitors increasingly want portable, mobile, information that goes though the park with them...a personal digital assistant...interactive and personalized...the functions of visitor centers will extend beyond the walls of buildings". *National Park Service Social Science Group, July 2003*

---

<sup>3</sup> Source: NPS Business Plan Initiative, 2004

---

## PRODUCT AND SERVICE

---

### Description

Horizonless Tours addresses needs of both the National Parks and their visitors through a unique solution: The e-Ranger. The e-Ranger is a mobile multimedia guide that combines off the shelf hardware with interactive software to deliver an engaging educational experience to the park visitor through the e-Ranger.

### Device

The e-Ranger device is a Personal Digital Assistant (PDA) ruggedized for outdoor use to protect it from the elements. It is equipped with 512 MB of multimedia content capacity, a Global Positioning System (GPS) antenna, 3-inch screen and headphone jack. A car dock provides speakers and a power adapter, in addition to keeping the main unit firmly in place. Families and groups have the option of renting one unit for the whole car, or multiple units with headphones.



### Interaction

Horizonless' proprietary touring software is designed with the visitor in mind to ensure enjoyable, hassle-free operation. The customer fills out a quick five question survey at the rental desk. The software is then able to tailor the tour to visitor preferences such as age, interest in content areas (such as geology or history) and available time. Personalization is a unique feature of the e-Ranger that increases time the customer spends learning and exploring topics and sites most interesting to them.

Out on the road, the e-Ranger uses built in GPS to automatically trigger educational audio content based on the visitor's location. The unit periodically makes sight suggestions based on the initial survey, but the visitor always remains in control. The e-Ranger adapts its offering to wherever it is on the park roads. An on-screen park map marks current location to prevent frustrating time spent lost. Voice activated prompts combined with location triggered content makes the device extremely user friendly. The option to pause is always available and a "tell me more" prompt is activated when more in-depth information is available. Horizonless continues to add new features to the e-Ranger software. These include trivia games, foreign language content and nature trail guides.

**Content**

Horizonless works with park rangers to develop compelling multimedia educational content. The production team takes great pride in producing professional quality visual and audio content. Horizonless goes the extra mile to get not only factually correct information, but also unique stories and knowledge from real people. A variety of park rangers, expert scientists and locals provide the narrative voices for the guide. This gives the tour a personal feeling from an electronic device. e-Ranger also offers tours targeted at children ages 5 to 12 featuring an animal cartoon character as narrator. In Yellowstone, “Eddie the Elk” takes kids on a fantastical journey through his home.

The depth of available content exceeds that of normal guidebooks or in-person tours and can be presented in engaging ways conducive to learning. Example content include:

**Geological:** Watch an animation on the inner workings of geysers.

**Historical:** See what Teddy Roosevelt wrote in his journal when he stood at your location.

**Fauna:** Hear the sound of an Elk bugling.

**Flora:** See how tall redwood trees grow compared to landmarks.

**Scenic overlooks:** Follow the map to our favorite view of Yellowstone Falls.

**VISITORS**

Feature	Benefit
Interactive Multimedia	Engaging
Location Aware	Reduces Frustration
Personalized Content	Relevant
Content rich	Educational
Always available	No waiting time
Go at your own pace	Visitor in control

**PARKS**

Feature	Benefit
Informed Visitors	Fulfill educational mission
Visitor Satisfaction	More return visits
Service Fees	Increased Revenue
Tracking Data	More knowledge of visitors

---

## INDUSTRY AND MARKET ANALYSIS

---

### Market Size & Growth

Broadly speaking, Horizonless Tours competes in the U.S. tourism market. In 2002, tourism receipts accounted for \$58 billion. Tourism had been steadily increasing and peaked in 2000 at over \$60 billion. The tourism market took a hit in 2001 due to the events of 9/11 and the fear of global terrorism. Tourism receipts are expected to rebound to 1999 levels by 2003-04 and are forecast to grow between 5-7% thereafter.<sup>4</sup>

### Trends

One of the major trends taking place in the tourism industry is the deployment of mobile multimedia applications for visitor use.<sup>5</sup> From the Smithsonian Institute to Alcatraz, visitors are being educated about the attractions they are visiting by multimedia devices that provide digital images, text and audio narratives.

Another key trend to Horizonless Tours is the growing use of personal handheld devices. GPS navigation device adoption is rapidly growing. Enterprise multimedia application deployment is on the rise. 48% of IT managers plan to deploy wireless applications and 76% of those IT managers plan to use PDAs as the deployment platform. The enabling technologies which Horizonless plans to employ are reaching maturity and usability of mobile devices is improving. Personal handheld devices are becoming commonplace, meaning consumers are becoming comfortable with the technology that Horizonless is renting.<sup>6</sup>

### Market Segment

Within the tourism market, tour operators accounted for an estimated \$2.8 billion in 2001.<sup>7</sup> Potential market segments for Horizonless Tours include museums, college campuses, sports venues, zoos, botanical gardens and other places that administer educational tours. Horizonless Tours positions itself in the underserved niche area of National Parks.

In 2003 there were over 266 million recreational visitors to national parks, slightly lower than the visitation peak in 2000. As tourism is expected to rebound to pre-9/11 levels in 2004, park visits will do the same. In fact, many U.S. tour operators have recently been adding programs to National Parks in the western U.S. to offset the decreasing desire to travel to foreign destinations due to fears of global terrorism and the weakening dollar.<sup>8</sup>

---

<sup>4</sup> Source: Euro-Monitor, 2004

<sup>5</sup> Source: Competitive Surveys

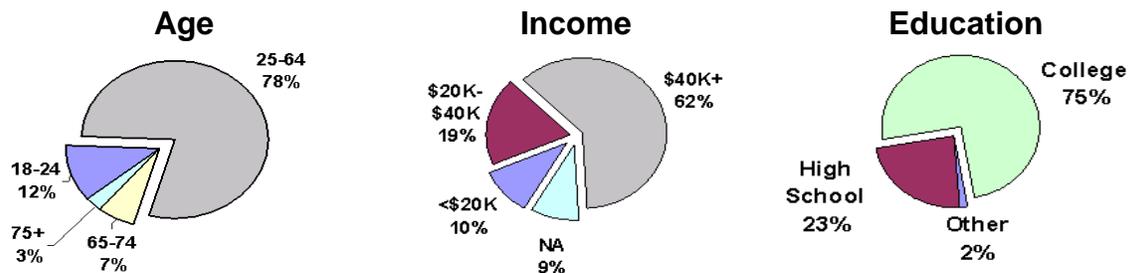
<sup>6</sup> Source: Gartner Group, 2002, 2004

<sup>7</sup> Source: US Census Bureau, 2004.

<sup>8</sup> Source: Tour Operators, "Encyclopedia of American Industries"

## Customer Analysis

The typical park visitor can be characterized as educated, over 25 years old and earning over \$40,000 a year, a suitable customer for the e-Ranger. As a result of these demographics, the typical visitor is likely to have disposable income as well as intellectual curiosity when traveling to the parks.



## Competitive Environment

Horizonless' main competition comes in the form of substitutes to electronic tour guides. Ranger tours, placards, and guidebooks are not able to personalize content to the preferences of the customer. Horizonless Tours competes on flexibility by using its content, coupled with location aware technology to give the visitors a more relevant tour, allowing them to go at their own pace to the locations they most desire. The key factor driving the consumer's decision making process is if the tour enhances the overall experience of the visit.

### Indirect Competition

**Travel Audios** is a company that offers CD audio tours for 6 National Parks.

**Ranger Tours** are not readily available, as they are held periodically or must be scheduled in advance. They are limited in geographical coverage and not customizable to the visitor.

**Wayside exhibits** offer limited information and are limited to specific points.

**Guidebooks/pamphlets** offer text, maps and pictures. Scope of information can be limiting, use while driving is not possible, finding information can be time consuming and the experience is not engaging.

### Potential Future Competition

Acoustiguide and AntennaAudio are two privately held companies that focus on audio tours at indoor, confined locations such as museums. Neither company currently offers a GPS system or personalization features, nor do they rent their products directly to consumers.

### Competitive Opportunity

Horizonless Tours has identified an opportunity to capitalize on the 260 million annual visitors to National Parks. Currently automated tour companies have not established a presence in the National Park system, and are not yet focused on this segment.

## MARKETING PLAN

### Target Market Strategy

Within the identified market segment of National Park visitors, Horizonless drives trial and adoption by understanding the needs and wants of park visitors. Utilizing the Journal of Travel Research classification of American travelers, the e-Ranger is positioned to appeal to general enthusiasts, soft moderates, and family vacationers, roughly 50% of the market. In Horizonless' initial survey of 85 respondents, 63% said they definitely or probably would buy. The various target market and their demographic, psychographics, and behavioral characteristics are listed below.



#### Primary Target

**General enthusiasts (27%):** Enthusiasts, travel with partner, middle to high income, American destinations, challenging and rugged.

**Family vacationers (13%):** Very family oriented, prefer American destinations, have kids

**Soft moderates (9%):** Middle aged mid-westerner, relatively low income, hiking and camping, familiarity, low risk, all-inclusive.

#### Not Targeted

**Upper high naturalists (14%):** The great outdoors, middle aged, married, professionals, mostly affluent, family and friends, novelty and overseas travel, stay longer.

**Active soloists (14%):** Risky activities, self oriented.

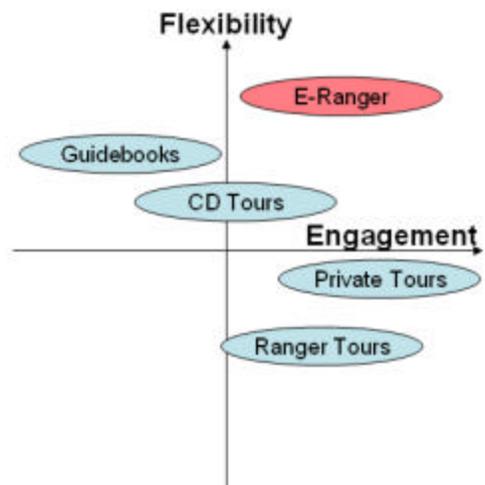
**Budget youngsters (22%):** Young price sensitive, typically self arrange, American destinations, travel with friends.

I've traveled a long way and invested a great deal of time and money to travel this park. I want my family to get the most out of the experience, and make it a memorable one. What will make my experience better that has a reasonable cost and easy to do? *Source: Customer Surveys*

### Positioning

Horizonless has identified price, flexibility and level of engagement as three main factors in making a tour purchase decision. Flexibility is defined as "the ability to get the information I want, when I want it" and is a factor of mainly breadth of coverage and availability. The level of engagement is the ability to keep the visitor interested and is affected by interactivity.

The e-Ranger delivers rich cultural, historical, natural interpretive content to visitors of National Parks in a more flexible, personalized and location-relevant fashion than guidebooks or human tours.



The e-Ranger is the best value in National Park touring because it provides an optimal mix of flexibility and engagement while remaining competitively priced compared to substitutes. Ranger or private tours are not flexible because they must be booked in advanced or taken at scheduled times. Secondly, in-person tours cover only a specific and limited geographic area.

Guidebooks are not engaging or interactive in any way as the visitor must actively search for a topic and read the contents aloud to other members of the party. By contrast, the e-Ranger is strategically positioned to appeal to value conscious visitors that want to get the most out of their park experience.

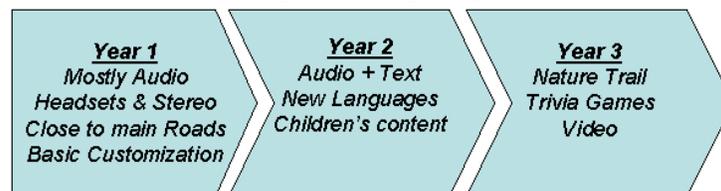
### Channels

Initially, all sales occur in direct to consumer point of purchase channels owned and operated by Horizonless. In partnership with the National Park Service, space is allocated for e-Ranger sales inside the park visitor center through a concessionaire relationship, which includes a variety of services for a 10% royalty fee. These points of purchase are staffed by trained hourly and commissioned-based Horizonless employees. Visitor center locations are supplemented by roadside stations on the main park road, close to entrances.

Additional opportunities will emerge in years 3 and onward to increase distribution of e-Ranger through other private enterprises that have concentrations of park visitors in their customer base. Examples include hotels and touring companies. These companies have a vested interest in providing a superior experience to their customers in an affordable manner and will partner with Horizonless to offer the e-Ranger.

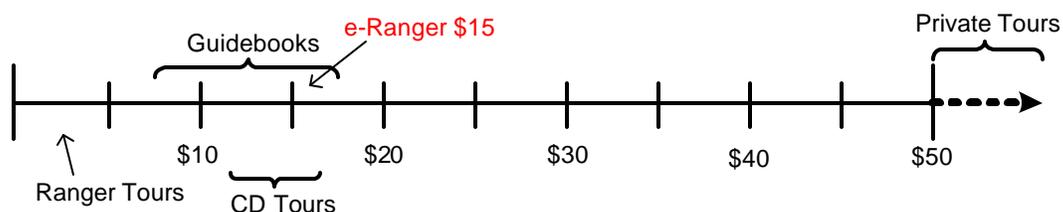
### Product & Service Strategy

The e-Ranger evolves over time to offer more unique and compelling features to our customers:



### Pricing

A customer pays a fixed fee to rent the mobile guide for the day. Initially, e-Ranger pricing has been established at \$15 a day through a pricing study, and will be further validated during the pilot phase. As per-rental costs are relatively low, pricing is value based and varies depending on the nature of the park and associated demand. Larger parks, those with more in-depth content, and those where longer stays are common, are priced higher than the average park.



Horizonless provides discounts to several groups to encourage rentals:

- Groups or families renting several devices.
- Multiple day rentals.

## Communication Strategy

Horizonless Tours leverages NPS brand equity in communicating with customers, as most have a positive emotional sentiment or affinity towards the parks they visit. The company communicates that the e-Ranger will allow visitors to get the most memorable and enriching experience out of their investment in traveling to the parks—all for a relatively small incremental cost.

### e-Ranger Messaging

. We offer a way for you to experience your parks like never before through the e-Ranger. The e-Ranger is easy to use because it always knows where it is in the park and will offer you information when it has something to say. Just like having your own personal park ranger by your side!

**Every park has a story to tell, are you listening?**

### Communication Media

The most important and frequent customer impression comes from point of purchasing signage and branding. These signs are placed at the entrance roads of National Parks and in high profile visitor facilities. A potential customer drives or walks past us 2-3 times during their park visit. Additional communication vehicles include an informational website linked from nps.gov as well as brochures available at nearby businesses, such as hotels and gas stations.



## Sales Strategy

### Customer Sales

Horizonless' sales approach is based on location and training. Horizonless relies on a concessionaire relationship with the National Parks to facilitate sales credibility and awareness. Once a consumer approaches the point of purchase, the sales associate (motivated by commission) is responsible for the sale. Their ability to perform a quick effective sales pitch hinges on

Horizonless' training program, which focuses on identifying the target customer according to a variety of characteristics and delivering a personalized pitch.

### Partnership Development

To enable access to park visitation facilities, Horizonless leverages its focus on National Parks and existing relationships to develop exclusive concessionaire partnerships for the e-Ranger. This partnership follows standard NPS protocols already in place for gift shop operators. Essentially the concessionaire is leased space in the visitor center in exchange for a 10% revenue royalty. The company also uses the NPS brand - customers do not know they are renting the device from a private company, similar to other park concessions. In Horizonless' conversations with NPS superintendents, 5 of 7 said they definitely would provide visitor center space for the distribution of e-Ranger services.

## Revenue Model

Three key factors in Horizonless sales projections are roll-out strategy, market potential and market penetration.

### Roll-out

Horizonless grows operations from a pilot park in year 1 to 20 parks by year 5.

Business Year	1	2	3	4	5
New Parks	1	4	5	5	5
Cumulative Parks	1	5	10	15	20

### Market Potential

Of the 265 million recreational visits to the National Park system, only a fraction of this number represents the market potential for Horizonless. First, parks with less than 1 million annual visits are not worth deployment investment and sales expenditures. Secondly, after evaluating park characteristics such as geographic layout, 46 parks are operationally feasible. Thirdly, park visitors travel in an average of 2.5 people per party. Assuming Horizonless is going to sell to only one person in that party, the market potential is reduced accordingly. Finally, Horizonless focuses on the 67% of visitors traveling by car. The resulting market potential is 35 million park visitors annually.

### Market Penetration

The e-Ranger will be available to 40% of the potential market by year 5. Based on concept test results, By year 5, the company will be in 20 parks with a total of 14 million potential customers. Horizonless expects 5% market penetration, taking 3 years to develop. This translates to 700,000 rentals annually.

Park Year	1	2	3
Penetration	2%	4%	5%

### Sales Projections

In thousands.

Year 1	Year 2	Year 3	Year 4	Year 5
\$280	\$1,560	\$3,690	\$6,390	\$9,230

---

## OPERATIONS PLAN

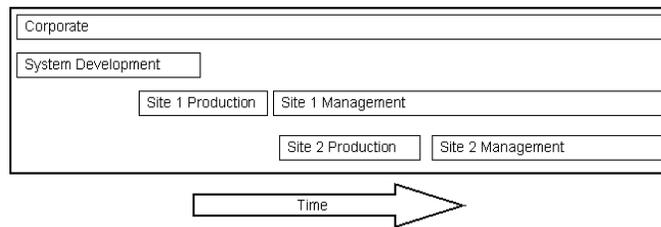
---

### Operations Strategy

Horizonless Tours operates sales booths at parks as well as conduct content development and site deployment efforts from the Boulder office.

Operations adds value through compelling, professional quality multimedia content and top notch customer support.

### Scope of Operations



### Ongoing Operations

#### Site Production and Deployment

Once a park has been identified as a good fit for Horizonless, the site production process begins. Our professional content development team identifies and interviews knowledgeable rangers, historians, scientists and other experts for narrative use. Existing content is gathered from the Park Service and other non-profit organizations. Content is then fed into the Horizonless Content Management System, which associates it with a geographic location and format it for the e-Ranger.



**e-Ranger Hardware**

The e-Ranger PDA hardware consists of the Garmin i3200. The device itself and accompanying car kit is purchased direct from the manufacturer at the negotiated wholesale rate of \$350/unit. The number of units is calculated as a factor of the average number of expected rentals in peak season. Because of the seasonal nature of visitation, this is normally near two times the overall daily rental average.

At the park, point of purchase sales booths are located in visitor centers and roadside stands at main entrances. The most convenient locations possible are chosen for stations so that customers can easily rent and return the devices. Standard equipment required at each site includes a PC, device charging station, drop box and mobile phone.

Site production and deployment takes approximately three months per park.

#### Site Operations

Each park is staffed by one site manager and two sales associates. Training is critical for the sales associates not only to be successful at making the sale, but also in providing a quick tutorial in e-Ranger usage at the point of sale. This quick customer training reduces the number of support calls made to Horizonless headquarters. Site managers are responsible for all park operations including profit and loss, as well as staffing a point of sale for a third of their time.

Customers are responsible for damage, loss or theft of the device. An imprint of the customer's credit card is taken at the point of purchase. The customer is charged the full replacement cost if the device is not returned in working condition by the day following their rental expiration.

Device replacement is an ongoing part of operations. From conversations with the manufacturer and considering the heavy usage of the device, it is conservatively estimated that one out of every 250 device rentals may fail.

Due to the seasonal nature of park visitations, Horizonless operates sales locations between 6 and 8 months out of the year, depending on the park. This allows the company to minimize sales expenditures and concentrate on new site development during the slow winter months.

## Cost of Goods Sold

<b>Cost of Revenue</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>
NPS Royalty	28,000	156,000	369,000	639,000	923,000
Transaction Fees	8,400	46,800	110,700	191,700	276,900
Device Replacement	26,509	145,798	344,613	596,446	861,533
Total Direct Costs	62,909	348,598	824,313	1,427,146	2,061,433
Labor Costs	48,240	241,200	482,400	723,600	964,800
Total Direct Costs	111,149	589,798	1,306,713	2,150,746	3,026,233

## DEVELOPMENT PLAN

### Corporate Development

Horizonless begins operations in January 2005 from its 2000 square foot headquarters in Boulder, Colorado. The city of Boulder offers a workforce of highly educated outdoor enthusiasts ideal for staffing.

Initial focus is on recruiting a talented team consisting of two software engineers, two content integrators and one project manager. During the first year, networking and customer support is handled by V.P. of operations who will also provide the vision for future innovations. Essential management and business development roles is the responsibility of the founders. Corporate functions outside the scope of core business (Human Resources, Accounting and Legal Services) are outsourced.



Rocky Mountain National Park

### Engineering

The focus in the first 5 months of development is the development of core software, the Content Management System (CMS) and e-Ranger tour application. The CMS serves as database, catalog and deployment engine. With the e-Ranger software, Horizonless integrates the GPS and voice activation software on the device with the Macromedia Flash based user interface. Extensive beta testing for usability with prospective customers follows.

---

## MANAGEMENT

---

### Management Team

The Horizonless leadership team features dedicated individuals with experience in the Park Service, marketing and technology.

#### CEO, Aaron Roth

As an MBA from the University of Colorado and a member of the National Park Service's (NPS) 2004 Business Planning Initiative, Aaron will head the company as CEO. Aaron's main responsibilities include investor relations, strategic direction, financial management, and partnership development (focused on the NPS relationship).

#### VP Marketing, Scott Semrad

Scott has previous successes in sales and marketing and is currently completing his MBA at the University of Colorado. The VP of Marketing focuses on developing compelling advertising materials, bringing in site managers with experience in small retail environments, and training sales associates.

#### VP Operations, Pankaj Agrawal

Horizonless seeks a senior technology manager with experience in multimedia applications on mobile devices to manage the engineering and production functions involved in deploying park sites. Initial management of this function is led by Pankaj, who has managed technology projects at Time Warner Communications and Level 3.

#### VP Finance

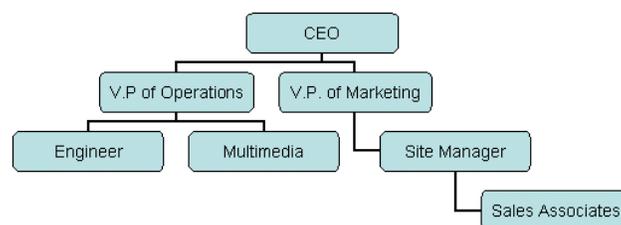
Horizonless seeks a senior financial manager and controller with experience in managing investors, consumer transaction processing, inventory purchasing, vendor negotiation, and cost control.

### Company Organization

During the prototype phase the company's headcount is kept to only essential personnel to deploy and provide service at the initial park site.

- **Organizational Chart Year 1**

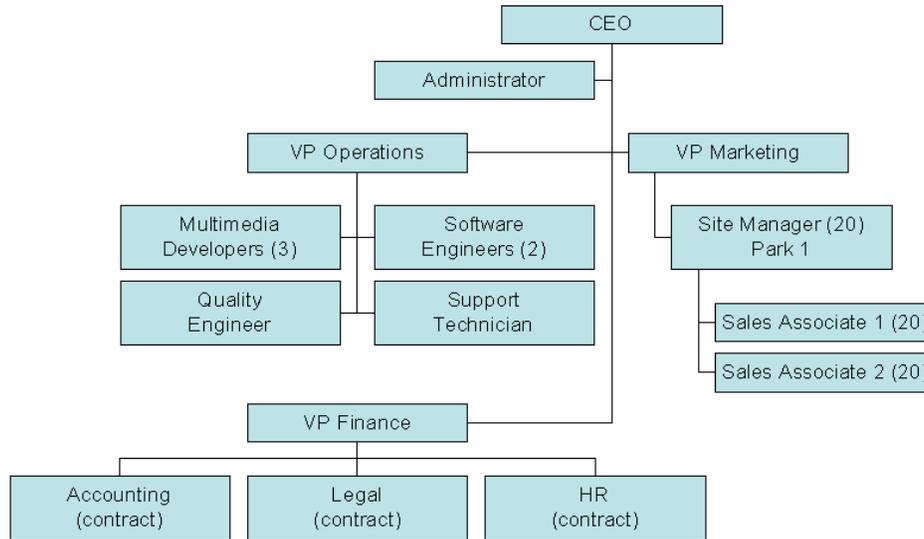
5 FTEs at headquarters, 3 at Parks



At year 5, Horizonless will keep management personnel relatively constant as additional sales and multimedia staff are brought on to manage sites and deploy new sites, respectively.

- **Organizational Chart Year 5**

12 FTEs at headquarters, ~60 at Parks



## Board of Advisors and Directors

The Board of Advisors includes senior executives from relevant experience areas to assist Horizonless in company decision making and execution. Potential members have been identified and include:

- Superintendent, Santa Monica Mountains, National Park Service
- Chief of External Affairs, Western Region, National Park Service
- Chief of Concessions, Inter-Mountain Region, National Park Service
- Professor of Telecommunications, University of Colorado
- Professor of Entrepreneurship, University of Colorado

Additionally, Horizonless will form a formal Board of Directors consisting of the CEO, founding members of the company, and angel and private investors from funding Series A. The actual terms of funding Series A will determine the structure of the Board.

---

## COMPETITIVE ADVANTAGE

---

Currently, no company is offering an electronic tour guide at National Parks. Horizonless plans to be the lone player in this niche over the long term by creating defensible barriers to entry.

### **Exclusive agreements**

Horizonless obtains exclusive agreements with National Parks to effectively lock out competition. Once the company is operating in the visitor center, new entrants would find it difficult to obtain the visibility necessary to gain market share. Exclusive contracts are commonplace in the Park Service, granted to private enterprises providing everything from gift shop operation to bus transportation.

### **Proprietary software and process**

Central to Horizonless' strategy is the development of a Content Management System (CMS) that facilitates a streamlined and semi-automated process by which content is assembled into an interactive tour. In this fashion, Horizonless is able to deploy at parks more quickly and control implementation costs more effectively than the competition. Furthermore, proprietary personalization algorithms unique to the company will be perfected over time.



### **Trade knowledge**

Over time, Horizonless employees gain key expertise in technology, content development and operations that enable the company to provide a compelling product while keeping costs down.

## FINANCIAL PLAN

### Summary

Horizonless Tours generates revenue from per-day rental fees and incurs costs of good sold through royalties, transaction fees, and hardware replacement. Gross margins stabilize at ~65% in year 5 with net earnings of 14% and breakeven occurring in year 2. The company is profitable and cash flow positive in year 3:

(\$000)	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>
<b>NET REVENUES</b>	280	1,560	3,690	6,390	9,230
<b>COST OF GOODS SOLD</b>	244	831	1,638	2,544	3,424
<b>GROSS PROFIT</b>	36	729	2,052	3,846	5,806
% of Revenues	13%	47%	56%	60%	63%
<b>EXPENSES</b>	309	943	1,766	2,605	3,579
% of Revenues	110%	60%	48%	41%	39%
<b>NET EARNINGS</b>	(273)	(214)	285	825	1,336
% of Revenues			8%	13%	14%
<b>CAPITAL EXPENDITURES</b>	(65)	(287)	(454)	(555)	(580)
<b>CASH FLOW</b>	(326)	(422)	137	793	1,617

Detailed income statements, balance sheets, and statement of cash flows are available in the Appendix.

### Assumptions

Key forecast assumptions have been validated through interviews, surveys and company analysis.

Revenue	Value	Rationale
Trial rate - percentage take rate	5%	End-user concept test of park visitors
Price - average daily rental rate	\$15	Pricing survey, 66% would pay up to \$15
Number of parks implemented	20	Company estimates
<b>COGS</b>		
NPS royalty fees	10%	Discussion with NPS representatives
Transaction costs	3%	Industry standard
Device life - # rents before failure	250	Hardware manufacturer estimates
Sales associates - hourly	\$20	Company estimates
Sales associates - commission	10%	Company estimates
<b>CAPex</b>		
Devices	\$350	Hardware manufacturer estimates
Device utilization rate	63%	Company analysis

## Funding Requirements

Horizonless requires \$150,000 in seed funding immediately to develop the first park tour and launch pilot services. This pilot phase validates all major assumptions around customer demand, pricing, and operational costs. As park installations ramp up after the initial pilot, Horizonless seeks an additional \$600K through a Round A to achieve the desired roll-out.

## Sources and Use of Funds

During the seed stage, the company founders will invest \$50K for proof of concept, and require an angel investment of an additional \$100K to launch services at the pilot park. Once the pilot park has reduced investment risk, a larger round of private capital will be used to expand to other parks, achieving needed critical mass to lock out competitors.

Round	Seed	A
Timing	Immediately	Year 1, Month 7
Amount	\$150K	\$600K
Sources	<ul style="list-style-type: none"> <li>▪ Founders (\$50K already in)</li> <li>▪ Friends and Family</li> <li>▪ Angel Investors</li> </ul>	<ul style="list-style-type: none"> <li>▪ Private Placement</li> <li>▪ Venture Capital</li> </ul>
Uses	<ul style="list-style-type: none"> <li>▪ System engineering</li> <li>▪ Pilot park content development</li> <li>▪ Pilot park point of purchase deployment</li> </ul>	<ul style="list-style-type: none"> <li>▪ Equipment: device inventories</li> <li>▪ Marketing expenditures</li> <li>▪ Working capital: Parks 5-10 content development and deployment</li> </ul>

## Risks

The major business and technological risks fall in three areas. Horizonless has tactics to reduce or mitigate the risk should it become a barrier to the venture's success.

- Partnership**     *Risk:* The NPS does not enter into a partnership with Horizonless.  
*Tact:* During the pilot phase, Horizonless plans to test an NPS-independent roadside station outside the park as a point of sale to compare performance. Additionally, park conversations have been favorable to date.
- Pricing**         *Risk:* Consumers may be more price sensitive than anticipated.  
*Tact:* Current pricing study suggests \$15 price per day is acceptable.
- Adoption**        *Risk:* Customers may not be able to use the technology effectively, or reticent to use it  
*Tact:* Horizonless has multimedia staff and VP of operations is on the cutting edge of mobile device design for ease of use; messaging is also focus on this feature. Concept tests indicate sufficient receptivity.

Overall, risks are mitigated through a comprehensive market test during the Pilot phase.

---

## OFFERING

---

**PLEASE NOTE:** All data provided in this section and elsewhere in this document are for educational purposes only and are not intended for any other commercial purpose. Information in this section is not an offer to sell securities or the solicitation of an offer to buy securities, nor shall there be any sale of securities in any jurisdiction in which such offer, solicitation or sale would be unlawful prior to registration or qualification under the securities laws of such jurisdiction.

### Investment Requirements

Horizonless currently seeks an immediate investment of \$150K to supplement an existing contribution of \$50K from the founders to begin development in exchange for common stock in the company. This funding must be quickly supplemented with a follow-on round Series A of preferred stock valued at \$600K for a total investment of \$800K in the company per the schedule set forth below.

### Valuation

With an estimated Price to Earnings (P/E) ratio of 10 from comparable company analysis and based on forecasted annualized earnings in Year 5 of over \$1.3 million, Horizonless will be worth \$13 million.

### Offer

#### Seed

With the immediate seed investment of \$150K, we are offering 36% of the company, 1.5 million shares, on a 100% IRR, at a \$.04 per share price.

#### Round A

The \$600K follow-on round will offer an additional 36% of the company, 3 million shares, with a 60% IRR at a \$.17 per share price.

### Exit

There are several privately held audio and virtual tour companies currently focused on indoor attractions, including Antenna Audio and Acoustiguide that may be interested in acquiring Horizonless in years 3-5 to expand their market reach. Additionally, there are large tour operators such as Abercrombie & Kent, The Mark Travel Corporation, and Globus & Cosmos that may expand their services to include virtual tour guides and be interested in acquiring the technology. Lastly, in the event Horizonless and its investors cannot identify a suitable company sale or acquisition, the Horizonless management team will seek to provide its investor base with liquidity through a debt supported management buy-out.



**Yellowstone National Park**

---

## APPENDICES

---

### Income Statement Horizonless Tours, Inc

#### Pro forma Income Statement

(\$000)	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>
<b>NET REVENUES</b>	280	1,560	3,690	6,390	9,230
<b>COST OF GOODS SOLD</b>	244	831	1,638	2,544	3,424
<b>GROSS PROFIT</b>	36	729	2,052	3,846	5,806
% of Revenues	13%	47%	56%	60%	63%
<b>EXPENSES</b>					
Sales & Marketing	123	473	959	1,533	2,136
Engineering & Production	95	95	117	139	139
General and Administration	78	296	467	470	506
Depreciation	13	79	224	462	797
Total Operating Expenses	309	943	1,766	2,605	3,579
% of Revenues	110%	60%	48%	41%	39%
<b>EBIT</b>	(273)	(214)	285	1,242	2,227
<b>TAXES</b>	0	0	0	(416)	(891)
<b>NET EARNINGS</b>	(273)	(214)	285	825	1,336
% of Revenues			8%	13%	14%

### Balance Sheet

	<u>Begin</u>	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>
<b>ASSETS</b>						
<b>CURRENT ASSETS</b>						
Cash	0	274,008	(147,857)	(10,508)	782,781	2,399,497
Accounts Receivable		0	0	41,000	71,000	102,556
Other Current Assets		0	0	14,760	25,560	36,920
Total Current Assets	0	274,008	(147,857)	45,252	879,341	2,538,973
<b>PROPERTY &amp; EQUIPMENT</b>	0	52,728	260,971	491,078	583,287	365,872
<b>TOTAL ASSETS</b>	0	326,736	113,114	536,331	1,462,628	2,904,845
<b>LIABILITIES &amp; SHAREHOLDERS' EQUITY</b>						
<b>CURRENT LIABILITIES</b>						
Accounts Payable & Accrued Expen		0	0	123,000	213,000	307,667
Other Current Liab		0	0	14,760	25,560	36,920
Total Current Liabilities	0	0	0	137,760	238,560	344,587
<b>STOCKHOLDERS' EQUITY</b>						
Common Stock	200,000	200,000	200,000	200,000	200,000	200,000
Preferred Stock	0	600,000	600,000	600,000	600,000	600,000
Retained Earnings		(273,264)	(486,886)	(201,429)	624,068	1,960,259
Total Equity	200,000	526,736	313,114	598,571	1,424,068	2,760,259
<b>TOTAL LIABILITIES &amp; EQUITY</b>	200,000	526,736	313,114	736,331	1,662,628	3,104,845

## Cash Flow Statement

	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>
<b>OPERATING ACTIVITIES</b>					
Net Earnings	(273,264)	(213,622)	285,457	825,497	1,336,191
Depreciation	12,765	78,974	223,588	462,472	797,342
Working Capital Changes					
(Increase)/Decrease Accounts Receivable	0	0	(41,000)	(30,000)	(31,556)
(Increase)/Decrease Other Current Assets	0	0	(14,760)	(10,800)	(11,360)
Increase/(Decrease) Accts Pay & Acord Expenses	0	0	123,000	90,000	94,667
Increase/(Decrease) Other Current Liab	0	0	14,760	10,800	11,360
Net Cash Provided/(Used) by Operating Activities	(260,499)	(134,648)	591,045	1,347,969	2,196,644
<b>INVESTING ACTIVITIES</b>					
Property & Equipment	(65,493)	(287,217)	(453,696)	(554,681)	(579,928)
Other					
Net Cash Used in Investing Activities	(65,493)	(287,217)	(453,696)	(554,681)	(579,928)
<b>FINANCING ACTIVITIES</b>					
Increase/(Decrease) Preferred Stock	600,000	0	0	0	0
Net Cash Provided / (Used) by Financing	600,000	0	0	0	0
<b>INCREASE/(DECREASE) IN CASH</b>	<b>274,008</b>	<b>(421,865)</b>	<b>137,349</b>	<b>793,288</b>	<b>1,616,717</b>
<b>CASH AT BEGINNING OF YEAR</b>	<b>0</b>	<b>274,008</b>	<b>(147,857)</b>	<b>(10,508)</b>	<b>782,781</b>
<b>CASH AT END OF YEAR</b>	<b>0</b>	<b>274,008</b>	<b>(147,857)</b>	<b>782,781</b>	<b>2,399,497</b>

## Expenses

(\$)

### Expenses

#### Sales & Marketing

##### Drivers

	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>
Salaries and Benefits	86,250	270,250	479,700	702,000	936,000
Commissions % of Revenue	10%	28,000	156,000	369,000	639,000
Marketing % of Revenue	3%	8,400	46,800	110,700	191,700
<b>Total Sales and Marketing</b>	<b>122,650</b>	<b>473,050</b>	<b>959,400</b>	<b>1,532,700</b>	<b>2,135,900</b>
% of Revenue	43.8%	30.3%	26.0%	24.0%	23.1%

#### Research & Development

##### Drivers

Salaries and Benefits	95,450	95,450	116,532	139,440	139,440
Total Research & Development	95,450	95,450	116,532	139,440	139,440
% of Revenue	34.1%	6.1%	3.2%	2.2%	1.5%

#### General & Administration

##### Drivers

Salaries and Benefits	64,000	73,600	138,060	141,600	177,600
Depreciation	12,765	78,974	223,588	462,472	797,342
Rent and Utilities	\$0	\$144,000	\$144,000	\$144,000	\$144,000
<b>General Administration Misc</b>	<b>5%</b>	<b>14,000</b>	<b>78,000</b>	<b>184,500</b>	<b>184,500</b>
<b>Total General &amp; Administration</b>	<b>90,765</b>	<b>374,574</b>	<b>690,148</b>	<b>932,572</b>	<b>1,303,442</b>
% of Revenue	32.4%	24.0%	18.7%	14.6%	14.1%

#### Total Expenses

	<b>308,865</b>	<b>943,074</b>	<b>1,766,080</b>	<b>2,604,712</b>	<b>3,578,782</b>
% of Revenue	110.3%	60.5%	47.9%	40.8%	38.8%

#### Allocation of Operating Expenses between:

Variable	50,400	280,800	664,200	1,015,200	1,384,400
Fixed	258,465	662,274	1,101,880	1,589,512	2,194,382
Total	308,865	943,074	1,766,080	2,604,712	3,578,782

## Target National Parks

<b>Primary</b>	<b>Annual Recreational Visits</b>
Great Smoky Mountains NP	9,366,845
Gateway NRA	8,567,769
Grand Canyon NP	4,124,900
Yosemite NP	3,378,664
Colonial NHP	3,329,139
Olympic NP	3,225,327
Rocky Mountain NP	3,067,256
Yellowstone NP	3,019,375
Zion NP	2,458,792
Acadia NP	2,431,062
Grand Teton NP	2,355,693
Glen Canyon NRA	1,876,984
Gettysburg NMP	1,769,688
Glacier NP	1,664,046
Boston NHP	1,617,503
Haleakala NP	1,444,668
Kennesaw Mountain NBP	1,422,380
Lake Roosevelt NRA	1,356,331
Ozark NSR	1,301,415
Joshua Tree NP	1,283,346
Mount Rainier NP	1,262,351
Shenandoah NP	1,163,950
Valley Forge NHP	1,132,976
New River Gorge NR	1,111,164
Everglades NP	1,040,648
Hawaii Volcanoes NP	991,875
Cumberland Gap NHP	987,782
Sequoia NP	979,297

### **Secondary**

20 additional parks

## National Park Service Partnership Conversation Summary

### Survey Method

At an NPS conference in Washington D.C., seven decision makers such as superintendents and chief rangers were interviewed.

Park	Position
Rocky Mountain National Park	Concessionaire Manager
Santa Monica National Recreation Area	Superintendent
Sleeping Bear Dunes National Park	Administrative Officer
Chickasaw National Recreation Area	Superintendent
Western Region Office	Manager
Great Smoky Mountains National Park	Superintendent
Independence National Park	Chief Ranger

### Results

- Would you be interested in seeing something like this offered at your park?
  - All were interested: 4 definitely, 3 probably.

If a company offered this product and wanted to form a partnership, offering this service to visitors, would you:

- Would you provide space in your visitor center?
  - 4 probably would, 3 may or may not.
- Would you provide interpretive content and design?
  - 1 definitely would, 3 probably would, 1 probably would not.
- Offer comments as to why you responded the way you did (sample responses):

"We think selling advertising on the screen would be a potential benefit to a corporate partner and they might pay for the entire implementation. We have been trying to implement this for years, we think it is a good way to improve visitor experience, train volunteers, etc."

"The way this would work at Rocky is we would want to approve the content using our interpretive staff. Also, we would provide you content to work from, of which we have a ton. The key would be to get you hooked up as a concessionaire – then we would provide support in terms of getting it out to visitors, perhaps a check out and return deposit boxes."

"The bottom line is we are cutting back on interpretive services everywhere, do this has to meet the need without involving a lot of effort from the park service. If it works it would be a great way to scale our interpretive resources. "

"We have a kiosk in our visitor center that provides some of this information but I like the idea of visitors being able to use it in the field. However space in the visitor center is an issue for us – we really don't have any room. Additionally, we don't have a lot of interpretive content available for this type of device, or much of a staff to help. "

**Findings:** All parks that were on the target list of feasible parks responded very favorably to the product.

## Concept and Pricing Test Results

Respondents were gathered through an online survey. Several hundred respondents were then screened to yield 86 in-frequent park visitors, excluding park regulars and those who do not travel to National Parks. We tested three key variables: Purchase intent, perceived uniqueness, and pricing.

### Survey

\* How many times each year do you visit a national park?

- |   |   |
|---|---|
| <input type="checkbox"/> Never            | <input type="checkbox"/> 4-6 times a year   |
| <input type="checkbox"/> Once a year      | <input type="checkbox"/> 7-10 times a year  |
| <input type="checkbox"/> Twice a year     | <input type="checkbox"/> 10+ times per year |
| <input type="checkbox"/> 3-5 times a year |   |

Consider the following product:

**<Image and product description inserted here>**

The mission of this tour guide is to provide you an enriching touring experience that really helps you get a feel for the place you are visiting. For instance, if you were visiting Rocky Mountain National Park, you would be able to see pictures in different seasons, watch videos of the bison and elk roaming, and hear a park ranger give a nature talk!

\* How different do you feel that a “mobile tour guide” would be from other ways to tour and see the sites?

- |                      |   |   |   |                |
|----------------------|---|---|---|----------------|
| 1                    | 2 | 3 | 4 | 5              |
| Not at all different |   |   |   | Very different |

\* How likely are you to use this “mobile tour guide” if it were reasonable priced and available through convenient outlets?

- |                    |   |   |   |                |
|--------------------|---|---|---|----------------|
| 1                  | 2 | 3 | 4 | 5              |
| Definitely not buy |   |   |   | Definitely buy |

\* As compared to using guidebooks or maps, how much more would you be willing to spend to utilize this “online tour guide”?

- |  |  |
|--|--|
| <input type="checkbox"/> Not at any price          | <input type="checkbox"/> No more than \$15 per day |
| <input type="checkbox"/> No more than \$5 per day  | <input type="checkbox"/> No more than \$20 per day |
| <input type="checkbox"/> No more than \$10 per day | <input type="checkbox"/> Up to: _____ / day        |

### Results

<i>86 Respondents</i>	
<b><i>Uniqueness among target</i></b>	<b>100%</b>
<b><i>Purchase intent among target</i></b>	<b>63%</b>
<b><i>Average price among target</i></b>	<b>\$10/day</b>

---

---

## Interview List

In addition to National Park Service interviews, Horizonless Tours conducted the following interviews when assembling this business plan.

- Stephen Janz, CEO Molalla Communications
- Phil Weiser, Professor, CU Law and Telecommunications
- Carl Herrmann, Founder, Alerta
- Kristin Creamer, Coordinator of Campus Visits and Tours, University of Colorado Office of Admissions
- Brad Wagner, Wireless private contractor
- Douglas Sicker, Associate Professor of Telecommunications and Computer Science, University of Colorado
- Tom Lookabaugh, Professor of Telecommunications, University of Colorado
- Jennifer Gance, StorageTek, Project Manager, HR
- Joe Ventura, Sales Manager Mapinfo
- Steve Hagan, Marketing, Navteq
- Sheryl Majors, Sales Associate, Mapquest
- Don Wilson, Programmer and Web Developer, Dataplay
- David Craig, Asst. General Manager, Hotel Teatro
- Brian Thomas, Executive Assistant Manager, Adam's Mark Hotel
- Jenny Virtulio, Director of Small Business Development, Denver Chamber of Commerce
- Stephanie Dalgard, Director, Denver Tourism Bureau
- Phata Jackson, Director, Denver Metro Convention and Visitors Bureau
- Chris Wand, Mobuis Venture Capital
- Bob Gill, President, Topaz Group
- Michael Gellman, CEO, Spire Media
- Bonnie Smith, Director of Tours, Garden of the Gods City Park
- Lee Herndon, Marketing Manager, Vail Resorts
- Dr. Kenneth Kozar, Professor/Associate Dean, Systems Dept. Leeds School of Business
- Jonelle Tucker, Tourism Professor, University of Colorado
- Linda Carter, Chief Operations Officer, Seven Falls Attraction
- John Eakes, Senior Associate, KRG Capital
- Chris Miller, Senior Partner ,Havoc Interactive
- Christopher Bouc, Senior Membership Director, Exclusive Resorts
- Marley Steele-Inama, School Programs Manager, Denver Zoo
- Bruce Wyman, Director of New Technologies, Denver Art Museum
- Anne Manning, Curator of Education, Blanton Museum of Art, University of Texas
- Trisha Nungester, Assistant Manager, Antenna Audio

## Founder Resumes

### Aaron Roth

3093 REDSTONE LANE, BOULDER, CO 80305  
AARON.ROTH@COLORADO.EDU

#### EDUCATION

**UNIVERSITY OF COLORADO** Boulder, CO  
**Leeds School of Business, Leeds and Deming Center Fellow**  
**MBA, Entrepreneurship and Marketing, May, 2005** GPA: 3.9 of 4.0  
 Recent consulting projects: Jenny Craig Brand Licensing Strategy, K-Mart Services Strategy, Magic Candle Market Research, Pepsi Health and Wellness Market Monitoring

**UNIVERSITY OF VIRGINIA** Charlottesville, VA  
**B.S., Systems Engineering, with distinction, May, 1998** GPA: 3.6 of 4.0  
 Concentrations in Economics and Management Information Systems  
 Internships: **Procter & Gamble** (Summer 1997), **IBM/Lotus Development** (1996)

#### EXPERIENCE

**NATIONAL PARK SERVICE** Santa Monica Mountains NRA  
**Business Plan Consultant (Summer 2004)**  
 Identified operational gaps, additional funding opportunities, creative partnerships, and cost cutting measures to improve the financial viability of the Santa Monica Mountains National Recreation Area.

**INTELLISEEK, INC** Boulder, CO  
 Mid-sized software company offering Marketing Intelligence and Customer Relationship Management solutions to Fortune 1000 companies.

#### **Director of Product Development (Jul 2001-Aug 2003)**

- Managed entire product development cycle including voice of the customer, strategy, ideation, concept evaluation, development, pricing, training, roll-out, and sales positioning.
- Delivered over \$8M dollars worth of new products on time for delivery to customers such as **Cingular, Nissan, Philips, Blue Cross, Bank of America, Nokia, Procter & Gamble.**
- Supervised 11 person development team, 2M annual budget, reducing costs by 25% over 2 years
- Defined requirements, product platforms, selected technologies, and managed implementation.
- Evaluated potential vendor and/or partnership candidates by assessing integration scenarios, total cost of ownership, joint product development, and reselling/OEM arrangements.

**PITTIGLIO RABIN TODD & MCGRATH (PRTM)** Washington, DC  
 Niche consultancy focused on product strategy and product development best practice implementation via on-site facilitation for Fortune 500 companies.

**Senior Business Analyst, (Aug 1998 – Feb 2000)**

## Scott Daniel Semrad

2306 Ogden Street, Denver, Colorado 80205  
PHONE (720) 985-7932 – E-MAIL: [semradscott@msn.com](mailto:semradscott@msn.com)

<b>EDUCATION</b>	<p><b>UNIVERSITY OF COLORADO</b> <b>LEED SCHOOL OF BUSINESS</b> <b>MBA CANDIDATE – 2005</b> Emphasis: Entrepreneurship, Real Estate Development</p> <p><b>UNIVERSITY OF NEBRASKA</b> <b>BA – HISTORY – 1997</b> Minors: Psychology, Sociology Study Abroad: Limerick Ireland (Spring 1995)</p>	<p>Boulder, CO</p> <p>Lincoln, NE</p>
<b>EXPERIENCE</b>	<p><b>UBS PAINWEBBER</b> <b>FINANCIAL ADVISOR – 1999-2003</b> Provided investment direction to both retail and institutional client for one of the largest global asset management firms.</p> <ul style="list-style-type: none"> <li>➤ Developed \$10 million client base.</li> <li>➤ Conducted detailed sales presentations for clients and potential clients.</li> <li>➤ Worked jointly with a number of the firms senior advisors in developing new client relationships.</li> </ul> <p><b>UNIPAC SERVICE CORPORATION</b> <b>CONVERSIONS SPECIALIST – 1998-1999</b> Worked in the loan conversion department for one the largest educational financial service company's in the U.S.</p> <ul style="list-style-type: none"> <li>➤ Analyzed and updated incoming loans.</li> <li>➤ Organized incoming loans to be updated on the Unipac system.</li> </ul> <p><b>PEGLER-SYSCO</b> <b>NUMEROUS POSITIONS – 1992-1997</b> Involved in sales, marketing, merchandising and operations for the largest food and restaurant supplier in North America</p> <ul style="list-style-type: none"> <li>➤ Involvement in the acquisition of Donnelly Medical Supply Company.</li> </ul>	<p>Denver, CO</p> <p>Aurora, CO</p> <p>Lincoln, NE</p>
<b>ADDITIONAL</b>	<p><b>PROJECT YOUTH FOUNDATION (PYF)</b> Volunteer time for PYF fundraising to help disadvantaged Schoolchildren in Denver.</p> <p><b>HOBBIES:</b> Golf, Squash, Running, Skiing</p>	<p>Denver, CO</p>

---



---

## BRADLEY HAHN

---

2992 Shadow Creek Dr #212  
Boulder, CO 80303

bhahn@hrplus.com  
720.565.2454

---

**EDUCATION****UNIVERSITY OF COLORADO****Boulder, CO**

Graduation Date: May 2005

GPA: **3.9****M.S., Interdisciplinary Telecommunications**

College of Engineering and Applied Science

Academic interests/coursework: VoIP, network security, technology law and entrepreneurship.

**B.S., Business Administration**

Leeds School of Business

Area of Emphasis: **Information Systems**

Minor: Computer Science

**EXPERIENCE****GALLERY ASSOCIATES****Evergreen, CO****Owner/Technical Business Analyst**

August 2002 to Present

*Gallery Associates operates under two trade names: HRplus Pre-Employment Background Reports and STAT America (drug screening). It has been profitable and steadily growing since its foundation by my family in 1989. Today the company serves over 400 clients across the country, with over \$6 million in revenue and 30 full-time employees.*

- Developed a five year strategic plan for continued growth.
- Conducted competitive analysis research.
- Evaluated potential opportunities for new service offerings and helped to develop new report enhancements.
- Analyzed key "make vs. buy" decision for IT infrastructure of new startup business.
- Evaluated several software development products/methodologies/procedures to make IT employees more efficient and effective.
- Responsible for IT department hiring process and decisions.
- Shared IT department management duties with the Director of Technology.
- Designed, developed, tested and deployed business intelligence data management system for tracking profitability by client and service.
- Conceived, gathered requirements and developed a web interface system for vendors to eliminate fax, data entry and clerk costs.

**UNIVERSITY OF COLORADO****Boulder, CO****Teaching Assistant: Network Design and Management**

Fall Semester 2003

**COLORADO SPACE GRANT CONSORTIUM****Boulder, CO****Web Management Team Lead/Ground Software Developer**

January 2001 to February 2002

- Designed system to link satellite main ground station at CU Boulder with remote partner universities via the Internet for data submission and secure remote command of the satellite.
- Developed web interface for K-12 students to view automatically generated graphs of live satellite science data and submit handheld instrument data to the central SQL database.

**TECHNICAL SKILLS**

JAVA, C++, C#.NET, Visual Basic 6/.NET, ASP.NET, ColdFusion, PHP, SQL, HTML, JavaScript, SQL Server, Sybase, Microsoft Office object model, Macromedia Dreamweaver, Adobe Photoshop, Active Directory, Windows 9x/2000/NT/XP, UNIX/LINUX

---



---

**Pankaj K. Agrawal**

2955 Glenwood Dr. Apt 213,  
Boulder, CO 80301

Email: [Pankaj.Agrawal@colorado.edu](mailto:Pankaj.Agrawal@colorado.edu)

Home: (303)786-8145, (720)352-1796

**EDUCATION****Master of Science in Telecommunication**

College of Engineering & Applied Science Graduate GPA 3.62  
University of Colorado, Boulder

**Bachelor of Science in Business Administration (Area of Emphasis Information Systems)**

Leeds School of Business Cumulative GPA 3.43  
University of Colorado, Boulder

**CERTIFICATIONS**

Cisco Certified Network Associate (CCNA)		2004
Tier II Support Certification (University of Colorado at Boulder)		2002
Oracle Certified Professional (On pl/sql)	2001	
Microsoft Certified Systems Engineer	2000	
Sun Certified Java Programmer		2000

**TECHNICAL SKILLS**

**Design Software:** Macromedia Dreamweaver, Fireworks, Flash and HTML, Cold Fusion.

**Programming Language:** Java (Applets, Serves, JDBC, and JSP), C++, PL/SQL (Oracle 8i).

**OS:** Win 98, Win NT, Win 2000, Win XP.

**Security:** Air Snort, Kismet, NESSUS, NMAP, Windows and Linux hardening.

**Wireless:** 802.11a, b & g, 802.16a.

**VOIP:** H 323, H225, H245, SIP, G 711, G723, G 729 etc.

**Protocols:** TCP/IP, UDP, RTP, RTCP, RIP, OSPF, IGRP, BGP etc and understanding of ATM

**Misc.:** MS Office, Clarify.

**EXPERIENCE**

**Level ( 3) Communications** Intern July 2004 to present  
Presently work for Production Support & Department Operation in IPDS-IT group. Job function includes:

- Generating weekly reports on data analysis, performance metrics, graphs & dashboard.
- Maintaining and reporting time tracker and contractors data etc.
- Updating website content and other coordination efforts.

**Time Warner Telecom Inc.** IP & Data Technical Intern June 2004 to July 2004  
Worked with the IP Manager on various tasks of IP address space management, allocation and database clean-up.