

**Chaffee Zoological Gardens/Fresno Zoological Society  
Information Technology (IT) Infrastructure**

**&**

**IT-Based Funding Strategy (Conceptual)**

Prepared by Rick Horowitz

TechStop™

<http://www.TechStop.com>

*(Phone Deleted for Internet Posting)*

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# **Chaffee Zoological Gardens/Fresno Zoological Society Information Technology (IT) Infrastructure**

**&**

## **IT-Based Funding Strategy (Conceptual)**

### **Introduction and Purpose**

This document reviews some preliminary ideas for building a technology strategy for the Chaffee Zoological Gardens. The primary emphasis is on utilizing technology in such a way as to enhance acquisition of funding for the Chaffee Zoo. Many of the recommendations surveyed herein are based on the belief that the best way to achieve that goal is to build individual, family, corporate and community interest in the Chaffee Zoo.

Technology itself provides merely an infrastructure. Alone it is no panacea for the funding issues facing the Chaffee Zoo. Through making the Zoo and its supporting Zoological Society more accessible and interesting to the public, it greatly improves visibility, and provides more ways for the public to become emotionally tied and monetarily involved with the life of the Zoo.

Too often, technology is used only to “push information.” This plan takes the view that what’s needed—both to fulfill the Chaffee Zoo mission, and to enhance funding activities so that mission *can* be fulfilled—is to build a relationship. To paraphrase a former first lady, “It takes a community.”

What follows is a survey and brief delineation of various ways to build and utilize the technology infrastructure to achieve these goals; this can be viewed as a Prelude to An Information Technology (IT) Strategy and IT-facilitated Funding and Marketing Strategy.

### **Existing Information Technology Infrastructure**

This section discusses how to utilize the existing IT infrastructure. The options outlined here are limited by this writer’s lack of familiarity with the Zoo’s available infrastructure. However, at least e-mail, and a web site (hosted by a third party), and T1 connectivity are believed to constitute the minimal currently available infrastructure.

#### **E-Mail**

Assuming that the Fresno Zoological Society has an e-mail address list of interested persons, e-mail can be utilized with a PayPal “Donate” button (discussed later in this document) to provide an access point for individuals to donate via the secure PayPal website. This is best facilitated by a periodic newsletter in the form of a web-formatted (e.g., HTML) e-mail. The “Donate” button would appear on every newsletter, near the bottom of the message. In these e-mails, individuals are not explicitly solicited for funds;

they are provided with interesting content regarding “current events,” in-progress and future projects being undertaken by the Zoo. The button’s presence on every such e-mail is an *implicit* request for funding, providing a somewhat low-pressure reminder that the Zoo benefits when people donate. Additionally, less frequent “Project Bulletins” can explicitly solicit funding utilizing a PayPal “Donate” button.

### **Web Site**

The ways in which the existing web site already available at [www.ChaffeeZoo.org](http://www.ChaffeeZoo.org) can be enhanced to stir interest and provide another access point for funding are discussed here; these are things which can be done “right now.” Later in this document, we will explore how a new IT infrastructure could create more “dramatic” (in every sense of the word) enhancements. The key to all of this is in the orientation of the site: Currently the web does a good job of *informing* the public. What’s needed is to *involve* them!

#### ***What’s in a Name?: Choosing a Web Addressing Scheme***

A minor, but critical, point about choosing a web addressing scheme requires taking into consideration ways in which a web address will be used. For example, long names are difficult to remember. When implementing any of the ideas in this section, we should keep in mind how easily the addresses (technically known as “URLs”) are to propagate. Consider Ray Appleton, who has repeatedly taken us to task for not doing enough to raise funds without taxation, directing potential donors to an online donation capability, for example. Since he’s a radio personality, many people listening to him will be unable to write down a lengthy URL. They could, however, probably remember [www.ChaffeeZoo.org/donate](http://www.ChaffeeZoo.org/donate). Teachers could easily locate [www.ChaffeeZoo.org/schools](http://www.ChaffeeZoo.org/schools) or [www.ChaffeeZoo.org/contests](http://www.ChaffeeZoo.org/contests). Other useful URLs include [www.ChaffeeZoo.org/animals](http://www.ChaffeeZoo.org/animals), [www.ChaffeeZoo.org/exhibits](http://www.ChaffeeZoo.org/exhibits), [www.ChaffeeZoo.org/tickets](http://www.ChaffeeZoo.org/tickets), and so on. In particular, note the absence of “.html” or “.htm” at the end of these URLs. This is a model which should be exploited, in order to facilitate integrating the web “activities” into other advertising media.

#### ***The “Kopi Sotiropulos” Approach***

On television, perhaps one of the most mundane shows to present has to be the weather report. A local weatherman, though, has become something of a celebrity by involving his audience in his broadcasts. He does this by visiting local schools, and filming his visit. Then, while presenting the potentially boring details of the weather, images of his visit play in the background. If people don’t tune into his program for the weather, you can bet they’re tuning in to see themselves, their children, or their school on television! This same approach can be used to help facilitate interest in the Chaffee Zoo website.

#### ***Activities, Contests, & Online Exhibits***

Children love contests. Teachers of children love to provide them with activities. The Chaffee Zoo website already attracts middle-school students looking for information on tigers, elephants, and other animals. Each animal at the zoo should have its own online “exhibit.” The exhibits would include a picture of the animal, and information (in several languages, if possible) about the species. This could be as simple as taking a photograph of the animal, and posting it on a page along with the information already present on the

signage at the actual habitat at the Chaffee Zoo. Local artists could be requested to provide “coloring pages” which would be scanned and converted to “PDF” (downloadable Acrobat Reader files) that kids could color. Where appropriate, information on how kids can get some “hands on” experience through experiments and crafts related to the species could be posted or linked to the page for each species.<sup>1</sup> Contests with prizes such as free entry to the Zoo for the child when accompanied by an adult (paying for an adult ticket, I might add) could be entirely conducted via the Internet. Winning drawings could be scanned and posted on the website.

### ***Home Page Donation Link***

Currently the Chaffee Zoo website has links along the left-hand side of the main web page for Visitor Info, Animals, etc. A “Donate” link should be added as well, and connected to the General Donation Page (see below).

### ***General Donation Page***

A web page should be created at an easily-remembered web address, such as [www.ChaffeeZoo.org/donate](http://www.ChaffeeZoo.org/donate). This page would contain general information about ongoing funding needs for the zoo, links to more specific programs (such as those for the Keeper Club, Safari Club, etc.), and a PayPal “Donate” button. The point of using “easily-remembered web addresses” is to allow local media to easily highlight the availability of the venue. Ray Appleton could give out the address on the radio, Kopi Sotiropulos could announce it during a weather forecast.

### ***Special Programs Page***

Another easily remembered address might be [www.ChaffeeZoo.org/programs](http://www.ChaffeeZoo.org/programs). This page would provide general information about special programs. Any breeding programs, building projects, or animal exchanges planned or in-progress, should be mentioned (and a link to a separate page for them) provided here. And, of course, the PayPal “Donate” button is available somewhere on the page for those who want to help.

### ***Events Page***

The Chaffee Zoo already posts information about events such as “Breakfast with the Animals” on their website. The events page should contain a comprehensive listing, as it does now, but with the additional ability to make reservations and payments via PayPal directly present on the page.

### ***“Sponsored” Educational Content***

People using the Internet tend to lose interest in static web sites. In order to maintain a steady flow of visitors, providing a greater “customer” benefit, as well as getting more eyeballs viewing the “Donate” buttons, there must be continually changing, interesting content. The site already has some of this; the Zoological Society should *market* this. For example, why not get Boot’s Camera or Horn Photo (or both) to pay for the right to have their logo on the “How to Take Great Pictures at the Zoo” page? On craft-oriented pages, Michael’s Arts & Crafts, Party Works, or Impressions could be the sponsor.

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<sup>1</sup> Although I thought of this idea myself, I have subsequently discovered that the San Diego Zoo already does similar. Examples can be seen at <http://www.sandiegozoo.org/wildideas/kids/>.

Scarab Glass Works could sponsor a page on animal glass art. (Businesses with websites of their own can be set up so clicking on their logo pops up a new window—we don't want the Chaffee Zoo window to close!—to their website.)

### ***Members Only***

Special content intended for Toucan, Keeper, and other zoological memberships might be created as an incentive to have people join these clubs. It might contain information such as advance ticket sales for upcoming events, among other things.<sup>2</sup>

## **Future Information Technology Infrastructure<sup>3</sup>**

All the ideas mentioned above can be implemented within the existing infrastructure. In this section, we discuss how to design a new network infrastructure to “take it to the next level.” Again, the heart of this section is about gaining the heart of the public. And that happens through using the IT infrastructure to *involve* them.

### **The Network Itself**

The network provides the skeleton upon which everything else depends. A well-developed network can provide connectivity for computers in different buildings or departments throughout the Zoo for file sharing, collaborative work, and e-mail. (Web and e-mail servers could be located at the Zoo, as well, but this seems already to be well-covered by outside vendor-volunteers.) It can be used to connect and track ticket sales registers, as well as sales and inventory at snack and gift shops. Informational kiosks strategically placed throughout the park can be connected, maintained and managed via the network. Some of these might show live images of the insides of dens, where visitors cannot otherwise see. Empty conduit already exists in trenches which could be utilized to form either a wire-based or fiberoptic network. Wireless nodes can augment this where conduit doesn't exist and/or isn't feasible. Switches, hubs, routers, wiring, servers, workstations, web-based cameras (“web cams”) will all tie together in one “zoo-wide” network. The specifics of this network will depend to some extent upon existing systems, and the final layout, which is not yet proposed.<sup>4</sup>

### **Web Cams**

One of the easiest items to add to a basic network would be web cams. These devices provide a live video view of their targets. Examples are visible at <http://www.savemartcenter.com/SMCwebcam.htm>, which utilizes a cam donated by Pelco of Clovis, and the more simplistic “Dan-O-Cam” run by Dr. H. Dan Smith, Professor, Department of Counseling & Special Education, CSUF, viewable at <http://129.8.34.16/index.html>. Placing a web cam, using either wire, or wireless media, could provide live feeds to add to the online exhibits (proposed above) for each animal. Keeping in mind the “Kopi Sotiropulos” approach, the web cam page could contain, in addition to the ubiquitous PayPal “donate” button, pictures of contributors or visitors to

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<sup>2</sup> Naturally, the URL for this would be [www.ChaffeeZoo.org/members!](http://www.ChaffeeZoo.org/members!)

<sup>3</sup> Many of these items are (normally) costly to implement. See “Funding the Network” later in this document to see how we make it happen.

<sup>4</sup> The actual network plan is a future project. The current document is “conceptual” in nature. It proposes in loose terms what exists, what is needed, and how to get it.

the Chaffee Zoo, pictures of another individual or group specified by a contributor (e.g., a classroom they want to feature), or local grade school classrooms that have recently interacted with the Chaffee Zoo.

### **Distance Learning**

This area goes somewhat beyond the scope of my experiences. Suffice it to say that with the presence of T1 facilities (mentioned by Ralph Waterhouse), tying in other zoo buildings such as the nursery and hospital and/or cages with a zoo-wide network, this becomes a viable activity.

### **Net Meetings & Video-Conferencing**

A fully-developed network would make it possible to conduct online cooperative or interactive video meetings with other zoos having similar capabilities. These services could also support live distance learning activities. It would be possible, under the right circumstances, to utilize this service to allow zoo personnel to virtually “visit” multiple school classrooms simultaneously.

### **Servers**

The Chaffee Zoo and the Fresno Zoological Society apparently receive services from the city, and at least one outside benefactor. This makes it somewhat unlikely that either group would want to run Internet-enabled servers from the zoo grounds themselves. However, with a network already in place, this would be a possibility. Web servers and e-mail servers could be brought “in-house.” It is unclear at this point what benefit there is to doing that right now.<sup>5</sup> To some extent, this will depend upon the actual network eventually implemented, and the evolving needs of the various users of that network. If the Chaffee Zoo is ever privatized, however, this could become an important factor.

More likely, there will be a need for “file servers.” These are servers which are utilized to provide a centralized location for computer-based files. These can be inexpensive Intel-based systems running Microsoft® Windows 2000 Server, or Microsoft® Windows 2000 Advanced Server. This centralization makes it possible to share files among network users, and also facilitates easy backup to tape as well as increased security. In the event these are used, a separate “Backup & Disaster Recovery Plan” covering procedures and responsible parties should be written.

### **Making It All Happen**

As noted, some of the ideas above can be implemented with existing resources. What about those which can't? How do we get a twenty-first century network? In addition to the network components, such as switches, servers, wiring, and web cams, there is a need to have someone who can plan, install, and *maintain* these items.

This section explores options for building the network.

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<sup>5</sup> This question, however, should be considered in the context of the potential benefits of the zoological society's ability to run secure servers. Any TCP/IP network, such as proposed here, could support this.

## **Corporate Sponsors**

The San Diego Zoo receives significant funds from corporate sponsors such as Kodak. Given that our current need is for information technology, it seems reasonable to pursue corporate sponsors from that industry.

### ***Microsoft®***

Microsoft® has already been approached by this author. According to a Medium Enterprise Representative from Microsoft®, the Fresno Zoological Society should be able to minimally qualify for academic pricing for software. To give an idea of the monetary value of this, the Microsoft® Office XP suite sells for approximately retails for approximately \$450-\$500. Academic pricing can reduce those prices to around \$150 or less per unit.<sup>6</sup> Microsoft® also maintains a generous program of giving cash donations to programs around the world. This needs to be further explored. We begin at <http://www.Microsoft.com/giving>.

### ***Valley Telecom***

Valley Telecom, a Fresno company, has already been approached by this author. They have expressed an interest in “giving to the community,” stating that Fresno has been very good to them. They specifically indicated a willingness to consider a proposal from me regarding a fiberoptic network for the Chaffee Zoo.

### ***New Horizons Computer Learning Centers***

Fresno’s location of the largest independent IT training company worldwide has already entered discussions with this author aimed at developing a cooperative program providing technology support for the Chaffee Zoo and the Fresno Zoological Society. Some of the students coming to New Horizons are participating in government-sponsored training programs. Others are young people who want to smooth their path to a technology career by taking courses to gain an industry certification from Microsoft®, Prosoft, Cisco, and others. Although they get premiere training from New Horizons, and may have years of personal experience working on computers and networks, they often don’t have formal experience. This can make it difficult to obtain an Information Technology job. If a program could be cooperatively developed between New Horizons and the Chaffee Zoo, each benefits. Students get actual hands-on experience they can list on their résumés, and the zoo network gets donated time to accommodate their technology needs. New Horizons has stated “we are definitely interested in doing this; we can make it happen.”

### ***TechStop Support Services™***

TechStop Support Services™ is a part-time IT training and consulting operation run by the author of this document, Rick Horowitz. Rick is also the Director of Information Systems for Valley Yellow Pages. TechStop Support Services™ was created to provide a vehicle for his writing, technical reviewing, external consulting, and “pro bono” activities. He has agreed to donate his time and energy to analyzing the information technology capabilities and needs of the Chaffee Zoo and the Fresno Zoological Society,

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<sup>6</sup> TechStop Support Services™ is currently in the process of developing wholesaler connections which could drop these prices even further.

to contacting various IT vendors for support, and to helping to oversee and/or guide any programs developed out of this. This document was prepared by him.

### ***Other Corporate Sponsors***

Other potential corporate sponsors include Valley Network Solutions, Inc. This company is owned by Daniel Duffy, who previously built, owned, and operated ValleyNet Communications, the first successful<sup>7</sup> Internet Service Provider in Fresno. AT&T Broadband will be queried, as well as CompUSA. Smaller IT-related companies in the Central San Joaquin Valley area are also good candidates.

### ***Rewarding Corporate Sponsors***

I'm not sure what the Chaffee Zoo currently does, other than a wall I've seen, to reward corporate sponsors for their donations. The website should be utilized to full advantage in this regard. In the event individual parts of the computer network are visible to the public (e.g., kiosks, web cams), these should be labeled with the logo of the sponsor.

### **PayPal**

Throughout this document, the PayPal "Donate" button has been mentioned. What is PayPal? What is this "Donate" button? As PayPal's website puts it:

PayPal is the easiest and cheapest way for small businesses *and websites* to accept payments online. [Emphasis mine]

Currently, the Chaffee Zoo and the Fresno Zoological Society are hampered in accepting online donations, or allowing the public to purchase zoo tickets, as well as Toucan Club, Keeper Club, or other Fresno Zoological Society Memberships. The reason is the lack of a secure webserver. PayPal makes it possible to obtain these services without the need for the zoo to maintain a secure server.<sup>8</sup> Instead, the Fresno Zoological Society would set up a PayPal account to receive money. PayPal's website contains documentation for website developers, and also provides tools, including the ability to automatically generate the HTML code required to "install" the appropriate PayPal buttons on the Chaffee Zoo website. All transactions actually take place through the PayPal servers, which are fully secure.

PayPal has been around for quite some time, providing services to anyone—individuals, or businesses—wishing to transact sales online. For years, they have enabled people to pay for eBay Auctions, books, or just to engage in private transactions. Payments can be made via checking accounts or using credit cards. Additionally, if the website carries the appropriate banner, visitors who do not have PayPal accounts can easily set one up "on the fly," and each visitor who signs up this way automatically generates \$5 (paid by PayPal) for the Zoo—*without even making a donation or purchase of their own!*

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<sup>7</sup> Cybergate was the first ISP in Fresno, but no longer exists. ValleyNet Communications developed into the Protosource Network, which still does.

<sup>8</sup> Incidentally, if so desired, a secure web server *could* be located on a new zoo network.

Visitors can make donations, or purchase tickets, items from the zoo stores, and memberships utilizing PayPal, which accommodates electronic transfers from checking accounts or charges to VISA, Mastercard, Discover, and American Express.

The PayPal “Donate” button referenced in this document is actually a variety of buttons specifically tailored for each organization—in this case the Fresno Zoological Society—any of which can be added to a webpage or an e-mail message. When the visitor to the website, or recipient of the e-mail, clicks on the button, they are taken to the PayPal secure site, and requested to fill in information about their PayPal account and donation. If they don’t have an account, they are allowed to set one up.<sup>9</sup>

The activity associated with the button can be modified. When the user clicks the button, and completes a successful donation, PayPal returns them to a web page specified by the organization. This way, they aren’t steering people away from the Chaffee Zoo website. If the donator decides to cancel their donation, a separate page can be set up for this; it is still under the control of the zoo. To see this in action, you can visit <http://www.TechStop.com>.<sup>10</sup> Look for the “Donate” button on the left side of the page (you may need to scroll down). Feel free to click it and donate some money to TechStop Support Services™. (Sorry, couldn’t resist—but that’s the kind of chutzpah one needs to raise necessary funding! And it would give you an opportunity to see how it works, too.) The button can also be set up with a “suggested” donation. When the donator clicks the button, this amount shows up automatically. However, this locks the donator into a specific amount; leaving out a suggested donation gives the donator the choice of how much to give.

PayPal does not (yet) have a program for non-profit groups, and so there may be charges (for Premier or Business accounts). It might be possible for the Fresno Zoological Society to set up a “personal” account. The personal account results in no charge to receive money; every penny donated would go to the zoo. However, it limits the payment options of the visitors to checking account electronic fund transfers (EFTs). It may also defeat the purpose—it appears to prevent utilizing the “Donate” button; donators have to go through several steps to donate instead. Credit card payments can be received by maintaining a Premier or Business account (and this might be required of the zoo, anyway). This unfortunately results in a charge of thirty cents, plus a percentage of the transaction. The percentage varies according to certain qualifications currently being explored, but range from 0.7% to 2.9%. While this percentage might seem high, it’s one of the lowest in the industry. While it might not seem “worth it,” one has to consider the fact the 0.7% to 2.9% for funds raised via the Internet versus the inability to raise *any* funds via the Internet.

The following chart gives a picture of the net amount received at various donation levels:

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<sup>9</sup> This takes just a few minutes for credit card users. Checking account users have to go through a verification process which is slightly longer. More information is available at [www.PayPal.com](http://www.PayPal.com)

<sup>10</sup> Or you can go to <http://www.TechStop.com/donate>.

<u>Start Amt</u>	<u>Base Chg</u>	<u>Net @ 0.7%</u>	<u>Net @ 1.4%</u>	<u>Net @ 2.9%</u>
\$1.00	\$0.30	\$0.69	\$0.69	\$0.67
\$2.00	\$0.30	\$1.69	\$1.67	\$1.64
\$3.00	\$0.30	\$2.68	\$2.66	\$2.61
\$4.00	\$0.30	\$3.67	\$3.64	\$3.58
\$5.00	\$0.30	\$4.67	\$4.63	\$4.56
\$10.00	\$0.30	\$9.63	\$9.56	\$9.41
\$15.00	\$0.30	\$14.60	\$14.49	\$14.27
\$20.00	\$0.30	\$19.56	\$19.42	\$19.12
\$25.00	\$0.30	\$24.53	\$24.35	\$23.98
\$50.00	\$0.30	\$49.35	\$49.00	\$48.25
\$100.00	\$0.30	\$99.00	\$98.30	\$96.80
\$200.00	\$0.30	\$198.30	\$196.90	\$193.90
\$500.00	\$0.30	\$496.20	\$492.70	\$485.20
\$1,000.00	\$0.30	\$992.70	\$985.70	\$970.70

Preliminary investigations show this to be the best rates available when using a clearing house. However, other methods will be researched.<sup>11</sup>

## **Conclusion**

These are just a few of the ideas for providing an IT network which will benefit the Chaffee Zoo, and the Fresno Zoological Society.

More important than the particulars of this rough report, however, is the understanding of the need to utilize Information Technology for more than just pushing information to the public. The Information Technology strategy of the Chaffee Zoo and the Fresno Zoological Society needs to aim at involving the public at various levels. Providing them with information is one way of doing this. But many people and corporations—don't forget the corporations!—will need something less subtle. When information is pushed outwards, it is often pushed to a passive audience. A modern Information Technology Infrastructure should be coupled with a modern Information Technology Strategy for the purpose of involving people. Notifying a passive audience of our activities is nice; engaging an active community is crucial.

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<sup>11</sup> Valley Yellow Pages is currently investigating ACH programs and procedures. This provides another avenue for obtaining information to the author of this document.