



## TechnoFrolics' (TF) Spin Browser™ Video Explorer (VE) Purchase, Production, and Pricing Options

(Last updated 1/14/10)

### Additional Spin Browser VE information links to supplement this document

1. Overview page <http://www.technofrolics.com/trade-show-exhibits-museum-exhibits/video-spinbrowser/video-spin-overview.html>.
2. Whitepaper, including many supporting client quotes, installation photos, complete feature list, and more <http://www.technofrolics.com/SpinBrowserTM-FeaturesAndAdvantages.pdf>.
3. A 5 minute TF promo Flash video, 2 minutes of which shows the Spin Browser system in action <http://www.technofrolics.com/video/flashvideo.html>.
4. Page introducing live capture <http://www.technofrolics.com/SpinBrowser/realtime/index.html>.
5. Document providing video and audio technical format notes for video producers <http://technofrolics.com/SBVE-VideoProducerInfo.pdf>.
6. Document discussing aesthetic issues surrounding video production for the Spin Browser VE system, and listing some of TF's stock offerings <http://technofrolics.com/SBVE-ContentInfo.pdf>.
7. Information on our free demo unit <http://www.technofrolics.com/touringspin>.
8. TechnoFrolics Contact: David Durlach, Director and Founder, email <david@technofrolics.com>, phone 617-441-8870.

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## **Introduction**

### ***Clarifying what comprises TechnoFrolics' patented Spin Browser™ video explorer system***

At its core, it is a sophisticated software environment that allows unparalleled fluidity and flexibility moving through video content within live, interactive contexts.

While the elegant, precision, and ultra-rugged stainless steel dial is the “face” of the vast majority (though not all) incarnations of the system, it is within the software where the bulk of the development work and value lies.

Thus, the predominance of the system cost (for small volume purchases) is for the software, combined with TechnoFrolics' 24x7x365 support, and creative/technical assistance before and after the project's completions, rather than simply for the bare dial hardware. This clarification is provided to correct some people's misperception that what makes up TechnoFrolics' Spin Browser system is substantially the dial hardware.

For additional information on Spin Browser VE features and advantages, along with many supporting quotes, installation photos, partial client list, etc., we strongly encourage reading our Whitepaper at <http://www.technofrolics.com/SpinBrowserTM-FeaturesAndAdvantages.pdf>.

### ***Diversity of projects, clients, and utilized system features***

The types of clients that employ TechnoFrolics' Spin Browser technology, the content presented, and the context in which the system is used, have all become progressively more diverse over time. One month a small children's museum will create an installation with just a few minutes of content and using their own computer, while the next a large institution will contract us to create a turnkey live capture system, with \$15,000 high-speed camera, terabyte-plus sized capture files and automated nightly backup, etc.

Also, because the sophistication and power of our system has increased dramatically, we are finding that while some clients want to use all it has to offer plus custom additions, others employ only a tiny fraction of its features. In addition, some clients use the system only a couple of times per year at conferences, while others run permanent installations 24x7x365.

And finally, certain clients wish us to provide consulting throughout the project, archive their content offsite permanently, and be systems integrators and point-of-contact help throughout the life of the exhibit, while others wish us to simply provide our dial hardware and software as one of many technology components needing integration.

### ***Our response***

Because of this diversity of needs, varying by well over a factor of ten in technical sophistication and budget, we have chosen to replace our stock table-based price list, with completely custom quotes.

Going further, we are open to two quite different methods of arriving at a final cost and deliverables document. One way is for clients to tell us what they need, and we will prepare a custom

recommendation and quote. The second way is for clients to tell us their budget, and we will tell them what we can provide for that amount.

Our goal in doing this is simultaneously to:

- ◆ Help clients choose what system features and relationship with us best suits their needs.
- ◆ Adjust to their budget.
- ◆ Charge an amount that will allow us to properly support our installed systems into the future, and continue to enhance the capabilities of the unique Spin Browser environment.

Note also that we rent and lease our systems, as well as offering them for sale.

## **Basic Components & Services Needed**

### ***Hardware:***

1. Computer (PC).
2. Display (LCD or CRT monitor, projector, etc.).
3. Spin Browser VE dial, encoder, and electronics/cabling to connect it to the computer.
4. USB software license key.
5. Static grounding cable for dial.
6. Surge-suppressed, filtered, power strip.
7. Cabinetry.
8. Optional:
  - a. Front-panel-removable hard drives.
  - b. Buttons, button-lights, etc.
  - c. Custom user interface hardware (pressure pads, light sensors, etc.).
  - d. UPS (Uninterruptible Power Supply).

### ***Software:***<sup>1</sup>

1. Operating System (Windows XP or 2000<sup>2</sup>).<sup>3</sup>
2. Spin Browser VE application.
3. Optional:
  - a. Custom application/client-specific modifications.

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<sup>1</sup> Note that by “software”, we mean code – e.g., operating system, Spin Browser VE application, etc. We do *not* include video/graphic content, as some media producers do when using the term.

<sup>2</sup> XP required for realtime capture.

<sup>3</sup> As of 2007-7-1, we have not tried the system under Microsoft Vista. We expect however that it will run there without needing too extensive modification.

**Content:**

1. Video.
  - a. Custom shooting, stock content acquisition, or both. (Stills and video may be used.)
  - b. Editing.
2. Optional:
  - a. Graphic content overlays as narrative, table-of-contents, progress bar, or the like.

**Services:**

1. Configuration of computer to autostart computer and Spin Browser application upon AC power up.
2. Formatting of video and optional graphics and/or audio overlay content to function properly within the Spin Browser environment.
3. Creating the Attract sequence - typically an engaging temporal path through content to catch visitors' attention, and that is entered after a pre-defined period of time (usually 20 seconds) of no user activity.
4. Backup and permanent archiving of:
  - a. Operating system with custom configurations.
  - b. (Photos of) CMOS/BIOS settings.
  - c. Spin Browser VE software with all configuration files.
  - d. Video, graphic, and audio content.
5. Installation of system at site location.

**Documentation<sup>4</sup>:**

1. *Users Guide* (for installation and maintenance).
2. *Software Configuration & Video/Audio Format Reference Guide* (for use by non-TF personnel to install and configure their own content).

**Warranty:**

1. TF's standard warranty on its dial and all connective electronics is 5 years.
2. TF's standard warranty on the computer and disk drives, should it supply those, is 2 years.
3. For very budget-strapped clients where there is no alternative, TF offers reduced warranty periods at reduced system cost.

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<sup>4</sup> Typically in printed and PDF formats.

# Turnkey or Not? What to request from TF.

## ***Overview & background***

TF can, within broad limits, provide as little or as much as of the Basic Components & Services listed above as desired. At a minimum, unless a custom physical interface is produced, TF must provide the Spin Browser dial, encoder, connective electronics, and Spin Browser application software. On the other end, TF can produce, deliver and install, a complete Turnkey system, creating the video, cabinetry, etc.

## ***Who supplies what - Pros, cons and related issues:***

In many situations, TF recommends that it provide all but the casework, screen/projector, and install - in other words, TF provides the computer, dial, software, configuration and backup/archiving services, etc.

Whether TF should produce the video, or receive it from the client or a third party, varies depending on the circumstance.

## **The screen/projector, casework, and install:**

In most circumstances, it is best that the client or third party provide these items. This is because, in most circumstances:

- ◆ The client already has a working relationship with a designer/fabricator/AV systems integrator, who is local and/or is creating and installing many exhibits at the same time with a common casework appearance (of which the Spin Browser VE is one).
- ◆ Screens/projectors vary widely in cost (mostly as a function of size/brightness) from \$250 - \$50,000, with typical costs in the \$700-\$7000 range. Because of this large range, clients often make their decision based on budget constraints, without needing significant input from TF.
- ◆ The cost of individually crating and shipping casework and screens (as opposed to bundling as part of a large truckload of exhibits, or in the case of the screens, being shipped directly from the manufacturer) can be expensive.
- ◆ The Spin Browser VE install is easy, and so paying for TF staff to install systems is rarely appropriate.

If, in a given situation, one or more of the above points are not applicable, then it may make sense for TF to provide additional elements.

## **The computer:**

In most circumstances, it is best that TechnoFrolics provide this item, with all video/graphic content loaded, Attract mode created, along with front-panel removable hard drives, backup hard drive, and archiving services. This is because:

- ◆ When TF provides the computer hardware and installs all software and content, it has the opportunity before install to insure the exhibit is running in a stable, trouble-free manner, with maximum image quality. Relatedly, TF will provide a parts and labor warrantee on the entire system.

- ◆ Unless there is a skilled computer person (hardware and software), and skilled video production/formatting person, both with sufficient available time, it may be impractical to perform the needed work outside TF.
- ◆ Even assuming such persons as described above are available, unless regular production work for the Spin Browser VE environment is expected to be performed, the first-time learning curve may make it more expensive than if TF were to perform the work.

The above said, there are nevertheless cases where the client or designer/producer wishes to supply the computer, and possibly install the software and video content, themselves. Such cases could include international clients, clients installing dozens of identical hardware platforms at the same time, clients or production firms expecting to work with TF on a regular basis, tight budgets and volunteer labor on the client side, etc.

In that case, the following points should be taken into account:

- ◆ If the computer is not provided by TF, there exists a greater possibility of problematic, possibly highly intermittent problems (as is always the case with arbitrary, untested, hardware-software combinations).
- ◆ TF cannot warrant the entire system as a unit, and thus such problems (if they arise) must be dealt with by the client or others (or by TF, charged on an hourly basis).
- ◆ The receiving party must perform software backup services and archiving of content, including installation of removable drive cartridges if desired.

In cases of higher-resolution HD formats, NTSC productions over 10 hours in length, and most importantly, with realtime capture systems, the hardware and configuration required to achieve smooth, trouble-free performance is sufficiently specialized that particular care and testing of hardware and software configuration is required. It is therefore normally recommended that TF perform this work.

In summary, careful thought should be given as to whether ease of serviceability of common hardware (a top reason for clients wanting to provide their own computer), or the (at-first) lower cost of performing in-house IT services, in fact outweighs the negatives that go along with turning a field-tested turnkey exhibit into a set of untested components. We are happy to advise you on this issue over the phone free of charge.

**If you do supply the computer from your end, please be sure contact us before equipment purchase in order that we may discuss detailed hardware requirements as relates to your project.**

#### **The video:**

Whether TF should research, acquire, and produce the video (from stock or outside custom sources, filmed or licensed), or receive it in final form from the client/designer/producer, is largely dependent upon a particular project's details. Please contact us to discuss yours.

In any event, TF should advise the video producer, as there are a number of aesthetic aspects related to producing for the Spin Browser™ VE that are quite different from producing for broadcast or conventional touchscreen system.

## HD (High Definition) or SD (Standard Def)?

Because the cost of deploying HD is becoming less and less on all fronts - filming, editing, TF's Spin Browser VE fee, etc. - it is strongly recommended that an HD system be used.

Natively filmed HD content is visually stunning, and shows detail simply not present in SD content.

And even if a client's video source content is limited to SD, working in an HD pallet offers great advantages including the ability to:

- ◆ Show SD video windows side-by-side.
- ◆ Show SD video on one side and explanatory text or drawings on the other.
- ◆ Intermingle high-res stills with video.
- ◆ Present crisp text in all reasonable font sizes.

## Pricing

### *Hardware and Software*

#### **Introduction**

As mentioned above, because of the enormous diversity in client technology and services needs, and budget, each project will be assessed and quoted on a case-by-case basis. That said, we have provided some ranges below as reference points to help orient.

Note that shipping, plus taxes (if any), are additional.

#### **Example 1: TF provides turnkey-internals, backup, advising, etc.**

TF provides Spin Browser VE hardware and software, computer, front-panel removable backup drives and permanent offsite content archiving, premium filtered power strip, creates Attract sequence, advises during project, 5 year warrantee on dial hardware, etc. - i.e., provides all but monitor, kiosk, and video content.

Typically in the \$5000-\$15,000 range per unit, depending on system features used, length of video, whether SD or HD content, dome or panel mount dial interface, educational or commercial application, number of units, etc.

#### **Example 2: TF provides dial user interface and software only.**

Others provide additional hardware needed (computer, monitor, etc.), perform all configuration work and backup, etc. TF engages in only minimal content and hardware advising during the project.

Typically in the \$2000-\$6000 range per unit, depending on similar parameters to those listed in Example 1 above.

Training time for 3rd party personnel is billed, if/as needed.

## **Realtime streaming capture systems**

Elements that will affect costs in such a system, in addition to those mentioned in Example 1 above, include:

### Cameras<sup>5</sup>

1. A single chip, low quality, NTSC (30fps 640x480) interlaced camera<sup>6</sup> can cost as little as \$100.
2. Decent quality 1 chip progressive scan HD cameras are typically in the \$1000-\$6000 range, depending on frame rate (e.g., for timelapse capture 1fps is usually fine, and camera much less expensive in consequence), image quality, and lens.
3. A high-quality 3 chip (red, green, and blue) progressive-scan 30fps HD camera is in the \$8000+ range.
4. High-speed (up to 10,000fps, or even higher) color camera can run upwards of \$80,000, depending on the resolution and frame rate required. However, for lower frame rates, say 200fps, you can get something decent for under \$3000, and for a 1024x768 single chip color 500fps camera, \$15,000 is about the ballpark.

In summary, there is a big range in camera prices. Please contact us for more information and to discuss your application.

### Size of video capture data set

For pre-produced content systems, it is rare for video to run over 2 hours<sup>7</sup> / 300 gigs in size. However, for streaming capture systems, content can be over 10 times that. In such an event, costs will increase.

### Automated content backup

For capture loop lengths in the range of a day or so (e.g., A Day in the Life of a Starfish), content backup is generally unneeded (because the system will completely reconstruct itself in just 24 hours even after a complete data loss). However, for systems that aggregate content over months or even years (e.g., seasonal weather capture installations), with file sizes potentially up to several terabytes, regular backup is *critical*.

Purchasing the hardware, configuring, and testing an automated backup system designed for several terabytes, typically runs in the \$3000 - \$6000 range.

## **Special “Competitive Upgrade” 35% off price reduction**

Periodically we are contacted by clients wanting to upgrade/convert select existing media-based exhibits from whatever they are using currently to a Spin Browser VE system, for all the reasons discussed in our Features and Advantages whitepaper<sup>8</sup>.

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<sup>5</sup> Analog, IP/Ethernet, CameraLink, Firewire, etc.

<sup>6</sup> Note that the real-time Spin Browser VE system deinterlaces on the fly.

<sup>7</sup> At 30fps.

<sup>8</sup> We strongly encourage you to read this if you have not. It is linked to from our Spin Browser VE overview page and in the Introduction section of this document.

Because we realize that once exhibits have been completed, budgets are significantly less than during initial design and construction phases, and because we are confident once people experience the Spin Browser system they will want to use it in other contexts, we offer special "competitive upgrade" pricing.

Specifically, in situations where the client is providing the computer and backup services, we offer our dial hardware and Spin Browser software at a 35% reduction off normal pricing. Our dial warrantee in this case is 2 years rather than the standard 5.

### **Refurbished systems**

Periodically refurbished systems become available at reduced cost. Please contact us to inquire about availability.

### **Rental and lease**

All our systems<sup>9</sup> are available for rental or lease, as well as purchase.

We also offer live capture environments, without the user interface hardware, for parties interested in performing timelapse capture - either for eventual use within a Spin Browser VE system, or for other uses (broadcast, web, etc.). Our system combines convenience with flexibility & power, in a unique way we have not seen rivaled, in terms of its utility for accumulating video where image quality and capture reliability is at a premium.

### **Dome vs. panel mount user interface**

Panel mount dials are used by most clients who build their own cabinetry. In contrast, the dome dial is used most in rental situations and other short-duration events. That said, perhaps 40% of permanent installations also choose the dome interface for its elegant look, and the ease with which it may be bolted to any surface.



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<sup>9</sup> With the exception of high speed cameras which are too costly for us to inventory.

## **Use of laptop or rackmount PCs instead of TF's standard mid-tower Unit.**

Where TF provides the computer, additional fees apply resulting from the increased cost of laptop or rackmount hardware vs. tower. Approximate cost increase, \$1000/unit for laptop, and \$650/unit for rackmount.

Note that for maximum performance (relevant to when one is pushing the limits on length of content, realtime capture, or very high-res HD), laptop machines should be avoided.

## ***Video content***

There is really no "standard" price for the video production, as quality, and related cost, can easily range by well over a factor of 10 depending on what is wanted.

Should you wish TF to supply video content, either via custom production or from stock, we would be happy to oblige. We are experts in creating content for our system<sup>10</sup>, and have over the years accumulated an extensive stock library specifically acquired for Spin Browser VE use, and whose license fees are just a fraction of the industry standard. If the content deliverable is well defined (or flexible), and creatable from our existing library, we can offer a flat fee. Otherwise, we typically charge on an hourly basis, plus licensing fees and expenses.

In the special case where the request is simply for “a good amount<sup>11</sup> of cool, diverse, educational material”, with no specific topic or custom content required, a purchase cost in range of \$3000-\$9000 (depending on length and specific clips) for the content (separate from hardware and software cost) is a reasonable estimate.

If we learn further details of your project, we will be able to provide more accurate pricing.

## **Miscellaneous**

### ***Production timeline***

Assuming video production and casework is handled by the client, TF normally requests 6 weeks from the latest date of receipt of: A signed agreement, down payment, all video content in final edited form - until shipment of the completed system. In emergencies, with a bit of warning ahead of time, we can often turn things around much faster than this.

Should video production, casework, custom modifications, or large volumes be required, please contact us to discuss extended timelines.

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<sup>10</sup> That said, we are very sensitive to the business needs of video producers. In particular, we enjoy long term, enjoyable relationships with several production colleagues, where we supply our Spin Browser VE hardware and software, and they produce the content. Thus, should the reader be a video producer, note that we are in most cases delighted to play the role of collaborator and supporter of your work, rather than being your competitor.

<sup>11</sup> Which we typically recommend to be about 30 minutes.

## ***Payment schedule***

### **Small projects**

Typically TF is paid 75% up front to begin work and purchase hardware, with the final 25% due within 30 days of receipt of unit(s) in good working order.

### **Large projects**

Typically TF is paid 50% up front to begin work and purchase hardware, 35% when completed system is ready to ship, and final 15% due within 30 days of receipt of unit(s) in good working order.

### **International projects**

For international projects, we generally require 100% payment prior to shipping, or that the money be put in a 3<sup>rd</sup> party escrow account.

### ***Volume discounts***

*Significant* volume discounts are given on multiple purchases. Please contact us with the details of your application for a quote.

### ***Custom designs in software and/or hardware***

TF frequently tailors the standard Spin Browser environment to address specific client needs. These modifications range from linear-slider user interfaces, to multi-dimensional content-addressing button arrays, to special ways of dealing with audio.

Cost for such custom designs range from as little as few hundred dollars for say four buttons that allow the visitor to select a particular content topic, to several thousand dollars for more complex modifications. For customizations that provide the Spin Browser system with new functionality of potential use to future clients, TF will typically subsidize the development cost at approximately the 50% level.

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Additional questions or clarification requests related to this document may be addressed to David Durlach at the phone and address in our letterhead, or sent to <david@technofrolics.com>.

**We look forward to working with you!**