

Business Models

LeRoy:

We have one more group from which we want to learn, and that's, "where is the money? Where is it going to come from? What is the budget, the finance?" We are going to keep Dean Chang here, and we are going to invite some other folks to the front. Ariella Lehrer, Craig Brannon, and Brenda Wiederhold, please join us and introduce yourself.

My name is **Ariella Lehrer**. I'm President of Legacy Interactive, the company from which Craig Brannon presented earlier today, the ACLS product we produce for Alsecer. Training is about 10% of our business; 90% of our business is actual games that sell in the consumer market. We produce games based on TV brands, Law & Order, Law & Order Criminal, Special Victim's Unit, Without a Trace, ER, and The Apprentice; those are our games.

My name is **Brenda Wiederhold**. I am the chief executive officer of Interactive Media Institute. We do training and therapeutic interventions in behavioral health care. I'm also the executive Director of Virtual Reality Medical Center that has offices in San Diego, Los Angeles, Palo Alto, and Sweden. I want to tell Ariella we use their Combat Medic game in one of our phase I DARPA programs to train combat medics with and without stress. You can actually treat patients in a sterile environment or you can treat patients while you have to return fire, and it was very successful. We showed the obvious that people that are given stress inoculation training actually do better on test and are not killed in action. Some of those people that we trained are now in Iraq and we're getting after-action reports that the training was significant for them. So I think you've done a good job in getting your games not only into the hands of people that need training at that level but also in places like Wal-Mart, and in places where the general public can learn skills.

LeRoy:

Why did you choose that game Brenda?

Brenda:

It was an off the shelf game. What we try to do in our clinics and in our research is use commercial-off-the-shelf (COTS) games as much as possible - modifying them, for example, adding realism with a \$9 fan from Wal-Mart to add 'wind' to the face of phobics as they go higher in open air elevators, thereby looking to the least expensive solutions.

Ariella:

In my previous company we produced a product for IBM called Emergency Room and it was a very popular CD-Rom sold into the consumer market, not intended to train, and was IBM's most popular consumer title. In 1999, IBM sold its' consumer division, so I obtained the rights from IBM for the name, started a new company, and produced

Emergency Room-2; a series of sequels followed, based on that style of medical simulation. Ultimately over about a period of 5 years, we sold over a million copies, primarily through stores like Wal-Mart, Target, and Best Buy. Those days don't exist any more. In the consumer market, these types of games were very popular for awhile and they typically would sell for about \$9:95 to \$19:95.

Speaker:

There was a time when it seemed like everybody was in that market. You had companies like the Learning Company, Knowledge Adventure, Disney, and everybody else jumping in and making software. That market has gone through a dramatic decline to the point that companies like the Learning Company don't even exist in the way it used to. Parents only want to spend about \$19:95, but a lot of similar stuff is on the web for free. Hopefully you guys are willing to spend more than \$9 and \$19 to get a good simulator so I think opportunities are still there. The people who are building those education products, they can really leverage their experience from what they've done in the past. Lots of them have learning experts on staff and they can put their skills into the products that could serve our community, and sell them for more than \$9 and \$19.

LeRoy:

Ariella, what is the model today for development?

Ariella:

In the consumer game business the PC market is really struggling. This year for example we had a great year for PC games. We had "Half Life2", we had "Doom3", and "World War Craft." It was a really good year for PC games. So, if you're talking about the consumer market, you really want to be on the console side. That's where all the growth is, that's where the dynamism is; PC developers are really struggling. Another thing that is happening over the last couple of years is, there's enormous consolidation in the consumer game business so that if you have a game idea and you want to find someone to help you publish or distribute it, there are fewer and fewer people to go to than there used to be. That kind of consolidation indicates a maturing industry, as evidenced by the cost of development going up a lot. Particularly, if one looks at the new platforms, we have an X-Box2 coming out the end of 2005, you have Play Station 3 coming out in 2006, and if it costs between 5 and 10 million dollars to do a game across all platforms today, it's going to cost you twice that much on the new platforms. They're much bigger, the number of assets that one has to create, the number of levels, the amount of game play—all require time and effort. With those kinds of high barriers to entry, it's really a hard way to get started in the game business today, and even harder on the console side of the business where not only do you have your marketing costs, and you have hardware licensing fees and manufacturing costs. Out of a \$50 Halo2, you might be paying \$10:50 to a Microsoft; for example just for the privilege of being on the X-box. So build all that into your model you see you gotta' have a 20 million before you get out the door. Now, there are still opportunities in the consumer market, and lower barriers to entry, so if you have a product idea --- I think some one mentioned surgery -- once a week, we get a request on our bulletin board for a surgery game because we still have all these old

customers who like the old emergency style of games . Life & Death was a great game along in the '90's.

LeRoy:

I remember Life & Death—it always kept sending me back to medical school!

Dean:

The business model for Microsoft is that they are loosing money on the X-box. They don't want to, but they do and they have to sell a certain number of games to make money. The point is they don't want to sell X-boxes to people who are going to use it for only one medical simulator, they're not going to make money on it. They have no control whether you buy it or not. The more important thing is you have to get permission from the platform owner to make a game on that platform, whether it's Microsoft, Sony, or Nintendo. That involves getting permission through a contract, paying at least \$10,000 for a development kit, and paying about \$7 for every copy of software that you sell. And also, if a company makes 300,000 copies that are left in the warehouse, you still have to pay the publisher for each of them. Like EA's Madden football for example, EA has to spend \$7 **for every single copy made, whether they sell, or not.** So, there are some major infrastructure issues about simply giving everybody an X-Box and making a medical simulator. Nevertheless, that does not preclude people from using games like *Super Monkey Ball* to get better at laparoscopic surgery. But, to modify game pads to look more like laparoscopic tools still requires permission from platform owners to make new peripherals.

Ariella:

It depends upon where you are in the hardware cycle. At the beginning of a new hardware cycle, when X-box2 first comes out, it's going to be geared to core gamers. Those are people who want the action games, first person shooter games. Once a hardware platform is out there for a few years, for example looking at X-box today, today you can go to Microsoft and pitch them on a more mass market title, a title that's not just geared to core gamers, and they will be more receptive to you than they would be in the first year or two when a platform first launches.

The opportunities today are in the consumer market, in down-loadable games. This is the market that's growing very rapidly. This is where some of the casual gamers have gone. They are not walking into Best Buy and buying the PC games off the shelf like they used to, but they are downloading them from the internet. These are 10megabite games, they cost \$19:95, its try before you buy, you get to play it for an hour, there mostly puzzle games, the Marquis games like Tetris and Jewels. Go to Shockwave, Yahoo, MSN Zone, Oberon, RealNetworks—all of those places have those kinds of games. You can produce one of those games for \$100,000, do a really good job and get it out on those networks, and you could see what happens -- that's a lower barrier to entry. There's another area that you can't help but be excited about-- the wireless area. There's a100 million cell phone users in the US, 400million in China, and when you look at this business, two years ago Legacy was considering making a text messaging game. I don't know if any of you use text messaging, but your teenagers certainly do. Two years ago this business certainly didn't exist, there wasn't compatibility across carriers. Do you know how many

text messages were sent in the US last month? 4 billion! All of a sudden it goes from 0 to 4 billion in about 2 years. Next week, Verizon is launching their new 3G network in this country.

I saw extraordinary digital cell phones. A digital phone, you have 2 antennas, one where you're getting your TV signal and the other one where you're using as a cell phone. You know, we're not doing this with our phones anymore, and were doing this. How many games were downloaded last month? Millions and millions of games were downloaded in this country. Ring tones, screen savers. So to produce a cell phone game, 3 to 5 years from now, when we have this conference, were going to be talking about delivering training content; these video clips now are possible over these 3G networks and the great thing about cell phones is your paying for every download. Forget the free stuff on the internet. Nobody is doing that on the cell phones. We're not making that mistake again. You pay every single time you download; you know kids are downloading like crazy. Look at the cameras, who had cell phone cameras a year ago? So it is the 12 to 18 years old group that is really driving this. This business has huge potential. So that's an area where it's much cheaper to make cell phone content. You do have to do it across a lot of different hand sets, but I can tell you what Legacy's planning. There are companies in Brazil, all over the world; you give them your game on one platform and they port it across a hundred hand sets for peanuts, and there you have it, you go to the carrier and your *On*. One must still do the marketing, and figure out how to tell your customers, "that's where the content is". But that's an area where if I was starting out and I only had a 100,000 dollars, that's where I would go.

The third area where I think there's great opportunity, again in the consumer market, is on handhelds. The new handhelds, Nintendo DS Dualscreen, are cool; it has wireless, it has two screens, its touch screen, some applications—one could totally do surgery on that! We're getting these really nice resolutions. Sony PSP is coming out in March 2005; it's an amazing machine. Software developments for those platforms much cheaper; you're not talking five million. You can do a really good game on the DS for \$300,000. And the devices themselves are really quite inexpensive—a Gameboy for only \$69? So in the consumer market, I think there is some low hanging fruit, I think there are opportunities not consoles but on some of these other distribution platforms.

Audience:

We have two opposite situations. The world of consoles, X-box, Play station -2, the wonderfully frozen architecture, so easy to develop, and the whole zoo of PC's with their video cards and all this free world. To develop for a console is easy but hard to market. All the licensee and permissions from Microsoft to develop for PC's is hard, because you have to worry about compatibility, but it's easier to market I guess. What about Mac's? They seem to be also frozen. G-5, G-4. No matter where you buy G-4, it's still G-4. Right? And no matter where you buy the notebook, its still Macintosh note book. Is there a potential market for games develop for Mac. There seems to be another low hanging fruit because it's easy to develop. Are there any hidden dangers in this market to develop for Mac?

Speaker:

I'd say there are no hidden dangers. There's an obvious one which is there is 3% market share.

Ariella:

That's the biggest problem. One nice thing about the Macintosh is since Apple stores have become so successful, you literally, once you build a Macintosh game, you need to get into two stores; CompUSA and the Apple stores. So your distribution is become really simplified, but the problem is its very hard to make money even if you do a port for \$30,000. When you pencil it all out, it's really hard to make money on the Mac. Now the one good thing is because of the iPod and now what Apple has done is completely switched there business model. They were always the high end. I think Steve Jobs got tired of people saying: I love Mac, but it's too expensive. Well, now they've come out with this box which is \$500. So, what they're hoping to do and it comes without a monitor (Mac mini) now what happens is , he assumes you already have your windows machine, but your going to buy the Mac because you want to do teleconferencing with your kids at college, you don't want to have all the hassles that iPod users have when they are hooking up with windows, you want to do seamless with your Mac, and you want to do your video applications, so Steve Jobs thinks we are going to go and get more Macs, the low end Macs into the homes and we're going to start building back. That share used to be 10% ten years ago, and now it's down to 3%. If that happens, it will be the first case that I know of where a peripheral drives a computer sales. But that's basically what's happening with the iPod.

Speaker:

The other hidden part of the Mac, I'm from Maine. Every 7th and 8th grader in Maine has a G-4 laptop allocated to them. Its complete homogenize platform across an entire school district. Apple has sold the same process to Fairfax County in Virginia; 35,000 students all with an allocated laptop to them. So one of the hidden things about a Macintosh depending on what you're trying to do, potential Foundation Funder or something like that so you can transition into this sort of training area. If the results out of Maine and Fairfax County, in a year or two show that a homogenize installed platform allocated per student gets huge returns, you will see this both on the PC side, but also heavily on the Mac side, there could be opportunities to look at there. If I was doing anything Macintosh wise, I'd be looking at that.

LeRoy:

Brenda, can we expect that patients are going to want to use their wireless systems?

Brenda:

What we see mostly is patients coming in that are not technophobes maybe, but they're not as highly proficient as a lot of us in this room are, so I think we have to go to a lower common denominator when we're dealing with a patient population versus dealing with a peak performer, or military trainee. What I see is most of my population is 30 or above, so they have to be taught a little bit when they come in. They don't have play stations at

home. They much prefer PC based thing. So we have to look at the end user, or the population we are building our software and hardware peripherals for.

LeRoy:

And downloads for them?

Brenda:

Downloads they're not that eager as yet. I don't even do downloads too well. So I'm not a gamer been.

Audience:

Talking about medical training and education kinds of simulation, how big a component of building something like that is validation. I work in the pharmaceutical simulation R&D area, it's very important but we also work with a small number of customers and each project is pretty large as opposed to trying to put something out in thousands of medical practitioner hands where people when they get this have to have some feeling that its going to be somehow realistic. I don't now if people have any experience with what validation costs and how much that adds into the business.

Brenda:

Validation I think is huge and we have several funded projects right now to do validation. It's been easier to validate things for the training market, with objective measurements like physiological monitoring, personality inventory self report measures. It hasn't been that easy and I've been pushing in the field of psychology for a decade. There are ten clinics in the United States using advanced technologies for patients care. So even though we have a controlled studies in the psychology market, they say its going to tae away from therapeutical liance, so we still have to do a better job at educating psychologists that this is just an adjunct to traditional therapy. I think when your talking the training market, validation is important. One of our recent funded DARPA projects was because we have validation metrics. What we do is we train in the simulated environment, measure the physiological responses and then test that. Do the transfer training in the real world environment and prove that they still have significant physiological arousal in the real world environment but they are doing better than the people that weren't trained in simulation first. So we have to validate.

Audience: (Sandy Ressler- National Institute of Standards and Technology)

I heard of two recent developments in the wireless world which sound very interesting, but I don't think they are available in the US. One, in the U, apparently people were able to give donations to Tsunami victims by simply sending a text message. So they sent a text message which then sent some money to someone, and conversely I'd like also to receive a service, not in this context, but for example, recently, Google has set up a text service where you send out a message and you get a message back- like what are the local pizzerias in your area. Do you know of any? Obviously what I want to do is I want to send a text message and receive a service like a picture or a download or something, but all I really want to do is send the text message because I don't

want to waste my time with the downloading. Is that coming to the United States?

Areilla:

Yes. I believe in fact that Tsunami was available in this country; the exact thing that you are talking about. A lot of different applications are available. I personally just use it to keep in touch with my kids in college, but I now that there are other more sophisticated applications.

Speaker:

In general, the US has been kind of a lagger compared to Europe and Asia with a lot of cell phone related things but, we are catching up.

Audience: (Gerard Lacey-Haptica)

With all of the discussion over the hardware platform, given the high software development costs, and that that has to be divided over such a small customer base, is that discussion over the hardware base really a non issue because it's such a small component of the actual cost?

The major problem is educating the market that these are expensive items; that medical simulation is a very expensive item because we don't have 6 million customers.

Ariella:

We've done a few of these medical training products and on the training side, we act as a developer. So we don't put our own money into the product, we are paid on a contract basis by a text book publisher in both instances to create the product. I don't know if you are familiar with the differences between developers, publishers, contributors; each has a role in the process. With text book publishers in our experience, the way it works is, actually in both instances they were pushed to do something interactive, they wanted to do an interactive simulation, actually buy the text book author. One time there was a man, one time there was a woman. They had seen some things and they were very interested, they had best selling text books, they went to the publishers and said: We want something interactive and the text book publishers then became interested because it was pushed at them by their text book author who they wanted to please. So, what happens is that they put together their spreadsheet, and they bundle it. They don't like to do sort of niche products in their role because they don't think they can sell enough at the high enough price to get their money back, so they look at the most broad based, the most appealing kind of products. So its first year paramedics, or first year nursing students or something like that. So then they look to see how many text books can we bundle this product with, can we sell it stand alone; they build their models, and come back to you and say: Okay, you have a \$250,000 budget, we want twenty scenarios, and then you go and do the product and you work with content expert, and you deliver it and that's sort of the way it works the first two times. The thing about text book publishers is, in my experience, they're really useful partners if you can find the right people because they are selling for the most part to the customers

you want to get to. They have the sales infrastructure; they're already their in their face, so they are happy to have yet another product to sell to those same customers if you can build it in a way that makes sense for them.

LeRoy:

Thank you all. It's been a great excursion. Thank you. We have been recipients of extraordinary information today. Thank you everybody for your attention, your contribution, your thoughts and expressions.