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NEXT GENERATION

The **future** of **interactive** entertainment

April 1995



pussycat?

Atari faces the toughest fight of its 27 year history. Can Jaguar claw its way back to the top? Or is this the last of Atari's nine lives?

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Movers & Shakers

A monthly look at **business news** affecting the **gaming world** **by Selby Bateman**



Selby Bateman, the executive editor of *Computer Entertainment News*, the US's leading trade newspaper for the computer leisure industry

THIS REALLY IS ROCKET SCIENCE!

NEWSLINE: So what if its games are any good? The coolest action from Rocket Science is its Home Page on the Internet, complete with previews of upcoming games, photos and info on key people, and a clutch of Rocket Science-branded merchandise you can buy on-line.

BOTTOMLINE: This is 'future-biz,' Internet style. The digital autobahn is an equal-access highway, and Rocket Science is not afraid to use it. With some $20 million in venture capital and well into producing its first round of games, the whiz-tech crew at Rocket Science is also showing how businesses must evolve and digitally branch out. ANY budding cybernaut can access this stuff. That's YOU, phone dude (www.rocketsci.com).

MO'NET MO'NET MO'NET

NEWSLINE: All of this Internet stuff is NOT just the buzzword du jour. Everyone's doing it, from videogame manufacturers such as Sega of America (www.segaoa.com) to the king of software, Microsoft Corporation (gopher.microsoft.com).

BOTTOMLINE: Between the new Internet craze and the rise of multiple-player games, why would any interactive game machine NOT ship with an on-board modem and software — or at least a parallel port ready to do the same? All eyes are watching the new XBand Video Game Network for Genesis and Super NES. XBand supplies a modem and matches up players with one another. The new year of 1995 could well see on-line videogaming finally take off.

THROUGH THE LOOKING GLASS

NEWSLINE: Pushing the envelope on realistic flight simulations is the business of Cambridge, MA-based LookingGlass Technologies — the same development talent behind such screaming successes as Electronic Arts' *Chuck Yeager's Flight Trainer* series and Origin's *System Shock*. By the end of February, LookingGlass was scheduled to publish its first PC CD-ROM title, *Flight Unlimited*, under its own label. So what?

BOTTOMLINE: 1995 is going to be a real dogfight in the flight-sim and aerial-combat categories, and LookingGlass is betting its bankroll (including a recent $3.8 million venture-capital infusion) that it can capture significant market share from the likes of Microsoft *Flight Simulator* and the debut of Spectrum HoloByte's *Falcon 4.0*, among others. Expect the skies to be filled and decidedly UNfriendly — on the marketing front.



Photo-realistic terrain and excellent flight dynamics make LookingGlass Technologies' *Flight Unlimited* look like a high flyer

ABSOLUTELY SEGA STREET

NEWSLINE: Sega of America debuted a 30-minute infomercial for its Genesis 32X add-on during Thanksgiving weekend and kept it playing in top-20 TV markets through the holidays. Called "Absolutely Rose Street", the program takes a "Wayne's World" sitcom approach to pushing Sega hardware and software.

BOTTOMLINE: Ever since Sega boosted its market share versus Nintendo of America with an in-your-face ad campaign for Genesis in 1993, Sega's ad approach has been widely studied — and copied. This new infomercial-with-a-plot is very different: No dumping on Nintendo and a decidedly soft sell. But will it move 32X? The dust should be clearing soon.

IF 32X IS TOUGH TO POSITION, WHAT ABOUT VIRTUAL BOY?

NEWSLINE: If you think that Sega might have trouble in '95 positioning the Genesis 32X with Saturn in the wings, just consider Nintendo's positioning on the hand-held Virtual Boy? Say, what?

BOTTOMLINE: That's right — Virtual Boy, hand-held-with-a-headset, recently debuted in Japan and has been tentatively planned for spring 1995 release in North America. Nintendo of America must decide whether it's worth it to bring to market this 32bit, RISC-chip-based, virtual-reality handheld system. Nintendo of Japan owns a minority interest in Waltham, Mass-based Reflection Technology, which in turn owns the VR LED technology. Of course, we thought Game Boy was a weird name; so don't count out Virtual Boy.



Will Virtual Boy rule the world? That's a cute tripod, but my neck is killing me

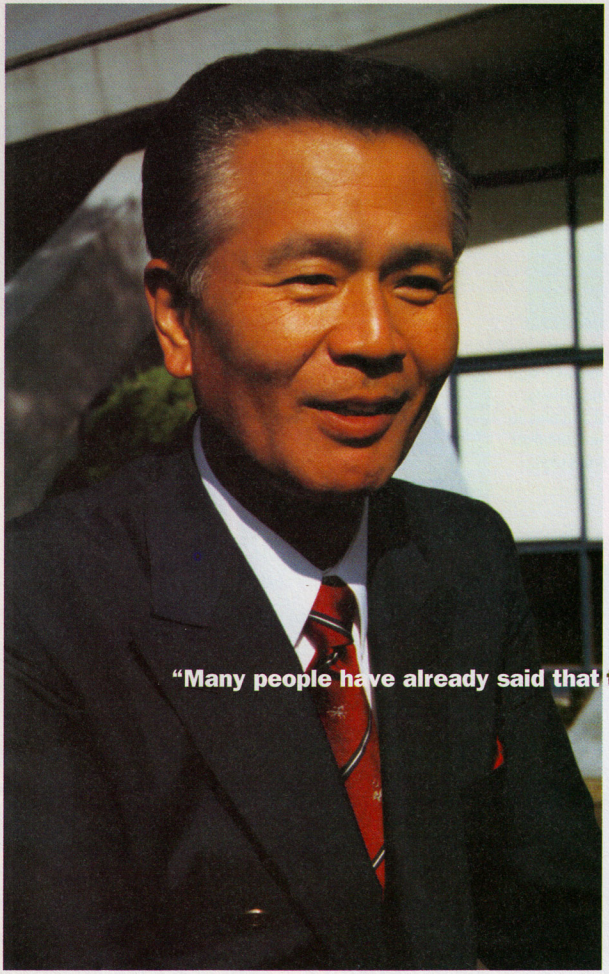
SPEAKING OF VR, HOW ABOUT VIRTUAL I/O?

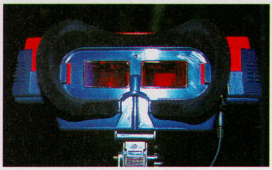
NEWSLINE: Who's going to deliver the first successful VR headsets for multiple platforms? Virtual I/O of Seattle is covering the waterfront with its line of Personal Display System (PDS) headsets. The units create visual effects from any standard video output, including TV, VCR, videogame system, or (with a converter) PC.



Virtual I/O's i-glasses, priced at $599, display two- and three- dimensional movies, videogames and television programming

BOTTOMLINE: After many high-flying promises, the VR headset market is about to take off in 1995. Improved technology and much greater cost efficiencies will allow for some real fun to enter the virtual world. Virtual I/O is getting a jump on the market with three different versions of the 8-oz to 11-oz headsets.







The Virtual Boy's standing mount (top), sans the standard head visor was designed, in part, to keep women's make-up from smearing. An NCL official demonstrated the proper usage of the Virtual Boy to curious in-lookers (above)

"Many people have already said that they can't understand the

An **audience** with...

Gumpei Yokoi

So what's the thinking behind Nintendo's Virtual Boy? **NEXT Generation** talks to Nintendo's hardware guru and the designer of the Game Boy about the latest — and much maligned — addition to his portfolio

In 1969, Gumpei Yokoi was a young electronics graduate looking for a job in his home town of Kyoto. He was taken on by Nintendo as a factory maintenance engineer at the time when the company still specialized in manufacturing Japanese hanafuda playing cards. Soon the Nintendo chairman, Hiroshi Yamauchi, recognized his creative flair — Yokoi was an electronics tinkerer who was forever knocking up gadgets out of spare parts — and moved him into a new division set up to create games and toys.

Yokoi's first project was the Ultra Hand, an extending-arm toy that sold 1.2 million units on its launch in 1970. After several other successful toys, including a baseball pitching machine, a periscope, and even a 'love tester' for teenage couples, Yokoi started to concentrate on electronics. What followed was the phenomenally successful Game And Watch and, several years later, the Game Boy.

NEXT Generation spoke to Gumpei Yokoi at the recent Shoshinkai show in Chiba, Japan, where his most recent creation, the already infamous Virtual Boy, was quietly unveiled to a less than impressed game industry.

NG: Just how important is the Virtual Boy product to Nintendo?

Mr.Yokoi: It really is a very big project, partly because it will be the first product of its type to reach the market and uses very sophisticated technology. We are even telling the Japanese press that we will achieve three million hardware sales in its first year on sale in Japan. At the moment we only have plans for its release in Japan.

NG: Is it Nintendo's next Game Boy?

Mr.Yokoi: Yes, in some ways. But we expect both the Game Boy and Virtual Boy to coexist alongside each other rather than the Virtual Boy being a replacement.

NG: When did the development of the Virtual Boy begin and how many engineers are working on the project?

Mr.Yokoi: There are four R&D groups within Nintendo, and my department



For fear of poor quality games being developed, Gumpei Yokoi and Nintendo have been careful of who develops games for the Virtual Boy

difference between the next-generation machines and the 16bit machines"



Before his creative talents were fully discovered by upper management, young Gumpei Yokoi was originally taken in by Nintendo in the late 60s as a factory maintenance engineer

(R&D1) has about 60 people working specifically on the Virtual Boy. Before this, we worked on numerous projects including the Game Boy, and also software for the Famicom (NES) and Super Famicom (SNES) such as the *Metroid* series. Other departments — R&D3, for example — are working on the Ultra 64 (under project leader Genyo Takeda, and in cooperation with Silicon Graphics in the US).

NG: When was the deal with Reflection Technologies finally tied?

Mr.Yokoi: They approached us about three years ago, but they didn't have any specific end-product in mind. So we hit upon the idea of utilizing two separated screens to make a 3D display.

NG: Did you look at many other forms of technology before deciding on LED?

Mr.Yokoi: Our first decision was to make use of virtual reality-type technology. From there, we thought about many concepts as display apparatus, including LCD devices.

NG: Most people who've seen the Virtual Boy in action are disappointed by its performance. Just how happy is Nintendo with the initial Virtual Boy software lineup?

Mr.Yokoi: I think that the most important point is to show the general public and third-party developers what kind of functions the Virtual Boy has. The initial lineup does that, although it's worth pointing out that it's not yet final.

NG: Some of the early Virtual Boy software looks distinctly 2D. Is it fully realizing the power of the 32bit processor?

Mr.Yokoi: The machine is running two displays simultaneously, obviously with two different images, and they have to be synchronized. That's why we need such a powerful Central Processing Unit — it's effectively doing twice as much work as a conventional videogame system.

NG: How many third-party licensees have you got signed up at this point?

Mr.Yokoi: We haven't been eager to show the technology to many third parties. We've limited it to only a couple up until now, although every developer was shown the product at Shoshinkai, and any interested will be given full product specs and the tools they'll need to develop for it. I believe that there will be a significant number of licensees interested in working on the Virtual Boy.

NG: Why have so few licensees been shown the technology before now?

Mr.Yokoi: This particular strategy was

dictated by Nintendo's president, Hiroshi Yamauchi. The main reason is that if we are going to allow any software publisher to develop games for our platform, there's a danger that poor-quality software will appear. So we wanted to limit that danger and maintain as much control as possible.

NG: Do you have any plans for polygon-based titles or games with other types of 3D environment?

Mr. Yokoi: Yes, polygon-based games are included in our plans, although I can't announce anything just yet. At Nintendo we have been extensively testing polygon software on the system, and third parties will no doubt be using their own techniques to develop polygon games. (It's generally known that Hudson Soft already has a polygon shoot 'em up in development for the Virtual Boy.)

NG: What do you believe, in your opinion, will be the most common type of game to appear on the Virtual Boy?

Mr. Yokoi: Personally, I think that it will be most suited to action and puzzle games, but in the future RPGs and simulations will become popular. (Nintendo loyalist and RPG specialist Square Soft is the only other third party to have been announced.)

NG: What are your plans regarding further software releases?

Mr. Yokoi: Approximately one title per month will be released immediately after the machine's launch, but that will obviously increase as time goes on.

NG: Has Mr. Miyamoto been involved in any software development?

Mr. Yokoi: Not at this stage, no.

NG: Is Nintendo worried about the potential physical dangers of true virtual reality, using head-mounted displays? Wasn't the Virtual Boy originally going to use a head-mounted display…

Mr. Yokoi: No, we didn't think that a head-mounted display would be necessary for a virtual reality system that doesn't use any kind of motion tracking facility. We are worried about the possible dangers of HMD technology, but we also considered the fact that if a woman wearing make-up was to use the head-mounted design, the next person might be hesitant in wearing it! So we changed the design so that you can just look into the viewing apparatus and still appreciate the 3D experience. The standard format was shown at the Shoshinkai show, but we have plans for a shoulder-mount adapter so you won't need a table or desktop to use the system.

NG: And this attachment will appear bundled with the machine…

Mr. Yokoi: No, it will be bought separately.

NG: So what will buyers receive with the system when it goes on sale?

Mr. Yokoi: The stand, the main unit, the controller and the battery box that will be slotted into the controller.

NG: The demonstration machines at the Shoshinkai show were running from AC adapters. Will that be the machine's primary power source?

Mr. Yokoi: No, it's a battery-operated machine. It uses six AA batteries which last for around seven hours. An AC adapter will go on sale separately at the same time as the system.

NG: Since the Virtual Boy uses cartridges, what size will most of the games be?

Mr. Yokoi: Eight Mbits will be the initial standard for most games, although 16 Mbit and 24 Mbit titles are feasible and will most likely appear at a later date.

NG: Is there anything else you can reveal to us about the hardware?

Mr. Yokoi: Sorry, I'm not in a position to give you details at the moment — only third party publishers that are currently signed up have that information.

NG: Are you currently doing any kind of work on other hardware projects at Nintendo — such as development for the Ultra 64, for example?

Mr. Yokoi: At this stage I'm only working on Virtual Boy. We (R&D1) aren't involved with the development of the Ultra 64 hardware — that's being handled in the US by Silicon Graphics and also R&D3.

NG: Isn't Nintendo worried about the arrival of Sega and Sony in the market with what could be very successful machines? How do you feel about the Ultra 64 arriving almost a year later?

Mr. Yokoi: When we initially started work on the Virtual Boy, it was at a time when the Super Famicom was really booming. But we still had doubts as to how long it would take before the general public would eventually get bored with a traditional display. So we came up with the idea of a 3D image project.

Now we are showing a product that coincides with the release of the PlayStation and Saturn. And I think that what we originally thought was right, because many people who have seen the demonstrations of these so-called next-generation machines have already said that they just can't understand what the difference is between them and the 16bit machines. Therefore, I think that the Virtual Boy will prove very important in this respect. ng

The Virtual Boy will be released in the US 'this summer' for $200. Three games are planned for availability at launch.



"We are telling the Japanese press that we will achieve three million hardware sales in the first year on sale in Japan"