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DIGITAL Hearts Co., Ltd.**Tested by Japan:
Bringing Japanese Quality to the World**

DIGITAL Hearts Co., Ltd. (hereinafter DIGITAL Hearts or the Company) was launched in April 2001 as an enterprise specializing in QA (Quality Assurance) testing services to detect bugs in pre-release consumer game software and reporting the results to the software developer. QA testing is a vital service to identify and correct software bugs that invariably crop up not only in game software, but also an array of computer software programs as well as various hardware systems that include digital devices, in order to make the product perform according to specification before it is marketed. Of the broad range of testing services that exists, the Company has specialized in providing detection and verification services not just for developers, but also developed proprietary testing services, or User-Perspective QA Testing, which meet the needs of end-users.

QA testing is generally thought as arduous and boring work. But DIGITAL Hearts founder and CEO Eiichi Miyazawa believes that is precisely why the meticulousness and sensitivity demonstrated by the Japanese are ideally suited to meet the demanding needs of the service. In his view, the Company can deliver superior Japanese quality through its User-Perspective QA Testing service to markets around the world. DIGITAL Hearts listed on the first section of the Tokyo Stock Exchange in February 2011, just ten years after it was launched. The following is a summary of the Company's vision and future prospects presented by CEO Miyazawa.

The Origins of DIGITAL Hearts

Before founding the Company, Miyazawa was a songwriter. He worked part-time at a neighborhood game maker because he could not make a living off the income from his songwriting alone. At the time, no one specialized in QA testing or offered it as a commercial service. As a result, game developers conducted their own testing by gathering individual proprietors such as jobless youth or freelancers and set them on short, intensive bouts of bug detection before releasing their product.

One QA testing method is known as the "white box testing" process, through which software glitches are detected by following the instructions prepared by developers. Another is called "black box testing," or "free check," which bugs that are unknown to developers are identified. Because free checking calls for developing hypotheses from analogies of previous issues, it requires a high level of expertise and experience. The problem was that the testing process relied on teams of individual

testers for a specific project, they were let go after their assignment was completed. Many testers quickly went on to find different work, making it very difficult to establish a stable pool of qualified testers with the necessary skill set and experience. Having seen this situation firsthand, Miyazawa decided to start his own firm in order to accumulate a bug verification tester base on a collective, rather than individual, basis. He would go on to make system investments on a strategic basis and patiently developed an effective bug database.

Game Development and User-Perspective QA Services

Before examining the operations of DIGITAL Hearts, we should first go over the four major phases of game software development. In Phase One of this process, the initial concept in which the new game is visualized as a series of images and developed; the prototype concept is then examined, finalized and approved. Phase Two entails devising a specification sheet, through which a game's major elements—including the details of the game systems, such game contents as a list of characters, composition of the various stages or levels, and list of required music and sound effects—are decided. The system is then designed based on the spec sheet. In Phase Three, the actual work to develop the game begins and, in the final step of this process, a beta version is made to evaluate the product before its market release. In Phase Four, the pre-launch work begins with the beta version as its basis and, as part of the work process, QA testing is conducted, while game console makers review the product. Following that, production begins and distribution commences.

As mentioned earlier, general QA testing includes correcting software bugs that are detected. But DIGITAL Hearts' service does not include correcting work. On the other hand, the Company differentiates itself from other firms through its User-Perspective QA Testing Service, which provides quality verification work from the vantage of end-users.

Detecting bugs generally require white box testing that follows the standards adopted by the software industry and hardware manufacturers, an area that DIGITAL Hearts also excels. Its core focus, however, lies with free checking verification work of specification-based operations. To reiterate, free checking is a methodology conducted from a user-based perspective, which includes testing a product in ways beyond the operating parameters expected by the game developer. DIGITAL Hearts takes this method further with what is known as a "usability check," which not only examines ease of interface operation but also the degree of entertainment of a game. The Company believes that Japan's greatest competitive edge—the meticulousness and unwavering sense of duty of the Japanese—works to maximize its User-Perspective QA Testing Service to the fullest. It should be noted that the software bug database that DIGITAL Hearts has compiled and operates has grown to 560,000 cases as of the end of March 2011.

From “Made in Japan” to “Tested by Japan”

DIGITAL Hearts’ primary point of contact with clients is their quality control departments. In the 1980s, when Japanese manufacturing and its “Made in Japan” quality swept and captivated the world, domestic makers developed a value system based on such industrialized society attributes as reliability and durability, with the aim of enhancing user satisfaction and preventing the emergence of consumer complaints. Quality was systematically defined and managed not only at every stage of production, but across the entire gamut of product development through such classifications as “quality of planning”; “quality of design”; “quality objectives”; and “fitness for use, usage quality.”

In the ensuing years, a move to redefine quality as a means to influence user satisfaction and consumer appetite was led by U.S. and European enterprises as society transitioned to the IT and digital age—a redefinition that included elements as “must-be quality,” “one-dimensional quality” and “attractive quality.” Attractive quality is particularly difficult to achieve as a product’s appeal had to be underpinned by such intangible factors as intellectual property rights and brand strength. One view holds that the recent decline in the “Made in Japan” appeal came about as many Japanese firms were reluctant to abandon their industrialized society paradigms of reliability and durability, failing to acknowledge and adapt their products to the attractive quality measure amid the concepts of quality underwent a redefinition.

DIGITAL Hearts is striving to develop a new value—“Tested by Japan”—by devoting resources to its User-Perspective QA Testing Services. The Company intends to promote throughout the world not only industrial-era quality, with which “Made in Japan” won acclaim, but also next-generation Japanese quality in the IT and digital age. To this end, it has launched a series of initiatives to enhance its service lineup, which now primarily address quality objectives and usage quality, to include project planning and quality of design. The Company is also planning to move into new business fields, to capitalize on the Japanese propensity for quality in areas besides QA testing.

Significance of Listing on the TSE First Section

DIGITAL Hearts, which went public in February 2008 by listing on the Tokyo Stock Exchange’s Mothers market, listed on the TSE First Section in February 2011. The central goal for the latest move is to prepare to expand its operations on a global scale. Demand for QA testing will escalate as society becomes increasingly digitized. Because QA testing by Japanese, as well as Japanese makers, is enjoying greater confidence particularly in foreign markets, the Company believes there exists higher added value in “Tested by Japan” quality. In fact, the first client for the QA testing

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services offered by DIGITAL Hearts when it first started up was a major foreign game console maker. The Company is currently working to reinforce marketing activities with foreign makers and expects being listed on the TSE first section will further augment its credibility.

Furthermore, DIGITAL Hearts has recently begun to accelerate the pace of change in its operations. While subcontractor projects accounted for a large portion of the Company's business in the past, it has since seen an increasing number of contracts that include the project producer phase and other areas of systems development. Through its latest listing, DIGITAL Hearts seeks to boost employee morale, reinforce its corporate structure and key on winning new projects.

FY3/11 Financial Results

As seen in Table 1, DIGITAL Hearts posted higher net sales and lower ordinary and net incomes in FY3/11 versus FY3/10. Net sales and incomes also fell short of projected targets. As for its business environment, while there is a growing trend to outsource QA testing of software and digital devices to specialty firms, the consumer game market underperformed as with no release of new hardware. Meanwhile, demand for QA testing has been shifting to mobile devices and other fields.

● **【Table 1】 Summary of FY3/11 Financial Results**

(¥ million)	FY3/10		FY3/11			Y/Y Change	
	Actual	% of Net Sales	Forecast	Actual	% of Net Sales	Amount	Ratio
Net Sales	3,416	100.0%	4,068	3,957	100.0%	541	15.8%
CoGS	2,065	60.5%	--	2,428	61.4%	363	17.6%
Labor Cost	1,799	52.7%	--	2,097	53.0%	298	16.6%
SG&A	829	24.3%	--	1,000	25.3%	171	20.6%
Personnel Expenses	394	11.5%	--	506	12.8%	112	28.5%
Operating Income	521	15.3%	620	528	13.3%	7	1.3%
Ordinary Income	526	15.4%	618	495	12.5%	-31	-5.9%
Net Income	306	9.0%	330	278	7.0%	-28	-9.0%

Note: All tables prepared by Trias Corp. with the data disclosed by DIGITAL Hearts Co., Ltd.

Against this backdrop, the Company's earnings shortfall can be blamed mainly on poor performances of its overseas operations and the impact from the March 11 disaster. DIGITAL Hearts has worked to expand its offshore operations, primarily in the United States, on the basis that Japanese QA testing quality has been acknowledged there. However, changes have come to foreign software developers in the wake of the Lehman Bros. collapse, especially from the end of 2009. While still recognizing the importance of user-perspective QA testing, these companies have begun to place greater emphasis on cost. This trend has forced the Company to compete in terms of prices, particularly with competitors from the emerging economies.

As a result of the March 11 disaster, DIGITAL Hearts suffered sales losses of 40-50 million yen;

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employees were sent home and placed on stand-by status and productivity consequently plummeted. Software developers have begun to pick up product development following the release of Nintendo 3DS in March, however.

With regard to the Company's operating, ordinary and net incomes, the income margins were pushed down by a surge in labor cost with CoGS in response to the Amended Labor Law and increase in personnel expenses to initiatives to beef up new operations.

Meanwhile, DIGITAL Hearts' mobile devices business, which includes SNS and smart phone applications, is growing on the back of the expanding SNS and smart phone markets, as well as their corresponding apps (see Table 2). In the arcade games business, which includes pachinko and pachinko slot machine games, earnings fared well because the Company was able to strengthen ties to its closest clients—which was aided as makers had undergone a consolidation—and also because it was able to participate in such upstream processes as product planning and lighting projects, in addition to providing QA Testing Services.

● **【Table 2】 FY3/11 Net Sales by Segment**

(¥ million)	FY3/10	FY3/11		Y/Y Change
	Actual	Actual	Amount	Ratio
Consumer Games	1,964	1,896	-68	-3.5%
Mobile Content	493	664	171	34.7%
Arcade Games	958	1,396	438	45.7%

FY3/12 Financial Forecast

In its forecast for FY3/12, DIGITAL Hearts aims to effect a reorganization of its business units by reducing redundancies in application projects. Specifically, the units previously under the administration of QA Testing Services—Consumer Games, Mobile Content and Arcade Games—were realigned as follows:

QA Testing Services

—Consumer Games: Consumer game software; online games; support services for game console makers' overseas operations

—Digital Solutions: Applications for mobile and smart phone devices; SNS online apps for mobile devices and PCs; support services for mobile device-based businesses; consumer electronics and commercial web systems

—Arcade Games: Pachinko parlor game and related systems

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Other Businesses (New Operations)

—Fuguai.com

—3D Content Production

Business Outlook by Reorganized Units: DIGITAL Hearts projects business performance to be brisk across the board. The number of project orders is expected to increase for QA Testing Services; Consumer Games will be given a boost through moves to strengthen the Company's overseas operations; Digital Solutions will reap the benefits from the expanding smart phone market and transition to a multi-platform environment; and Arcade Games will grow on the back of demand continuing from FY3/11 for QA testing due to increasingly complex systems and stronger ties with close client-makers. The Company also anticipates that it will achieve profitability in its Other Businesses segment as well. As a result, it expects to generate higher profits on higher sales in FY3/12.

● 【Table 3】 Summary of FY3/12 Financial Forecast

(¥ million)	FY3/11		FY3/12 Forecast				Y/Y Change	
	Actual	% of Net Sales	1H	2H	FY	% of Net Sales	Amount	Ratio
Net Sales	3,957	100.0%	1,945	2,564	4,509	100.0%	552	13.9%
Operating Income	528	13.3%	180	465	645	14.3%	117	22.3%
Ordinary Income	495	12.5%	178	468	646	14.3%	151	30.6%
Net Income	278	7.0%	98	257	355	7.9%	77	27.6%

New Initiatives

In September 2009, DIGITAL Hearts opened a branch in Los Angeles to tap the U.S. market through its Consumer Games unit. But a full-fledged launch was delayed as game developers instituted dramatic software development cost cuts due to the aforementioned global slump in the consumer game market.

As for QA testing, although foreign game developers have started to outsource testing to some of Asian companies, because they have been hit with quality issues with testers there, they opted for Japanese quality and turned to DIGITAL Hearts. However, game title projects of foreign developers are far larger compared to Japanese titles and because foreign titles feature a greater number of steps than only free checking, which is a Company strength, carrying out QA testing services exclusive in Japan is simply not cost effective. In response, DIGITAL Hearts is now examining ways to improve the cost competitiveness of its testing services by reclassifying its testing processes from the perspective of quality and cost. Moreover, it will be adopting new initiatives to upgrade its

business operations to improve cost competitiveness without sacrificing service quality.

One of the new operations belonging to the Other Businesses segment, 3D Content Production is also looking to expand abroad. DIGITAL Hearts currently has a corps of more than 4,500 registered QA testers. The Company had been examining the possibility of applying the creativity and skills of these testers to other technical fields. In January 2011, DIGITAL Hearts announced that it will be entering the 3D production business through technology that converts 2D images into 3D.

As the blockbuster 2009 hit *Avatar* demonstrated, 3D technology is expected to redraw the shape and direction of consumer games, pachinko games and mobile devices, dramatically expanding the market. On the other hand, the production of 3D content remains expensive—which is why DIGITAL Hearts has keyed on converting 2D content to 3D images. The Company has initiated a special program to train technicians in “rotoscoping”, a technique that calls for the manual clipping objects from 2D image for creating 3D images, and preparing the groundwork for the service production and distribution.

● **【Table 4】 Major Management Indicators**

Indicators	Unit	FY3/08	FY3/09	FY3/10	FY3/11
Net Sales	¥ million	2,372	3,378	3,416	3,957
No. of Clients	Companies	398	529	636	795
No. of Registered Testers	Persons	2,375	3,508	3,542	4,588
No. of Title Leaders	Persons	101	140	167	176
No. of Permanent Hires	Persons	105	135	153	151
No. of Bug Cases	Cases	220,000	320,000	460,000	560,000

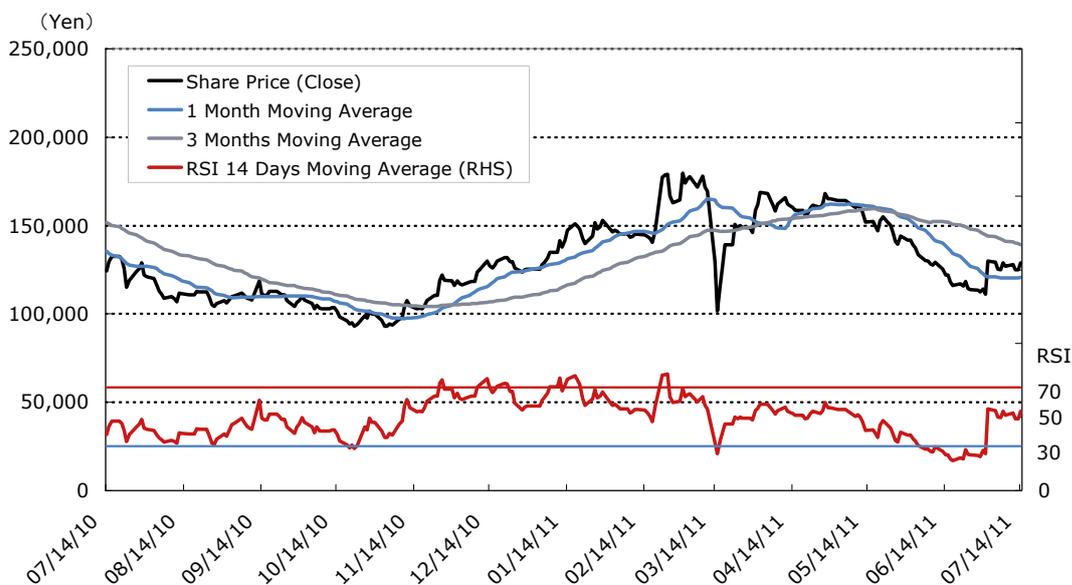
The Other Businesses segment also features Fuguai.com, a portal which collects information on product defects from site members on all products sold in Japan. Since the site was launched in 2008, more than 20,000 cases have been collected. Capable of sharing information on defects as well as recall announcements, it currently has a site membership of over 4,500, the men and women who represent general consumers and have their voices heard. DIGITAL Hearts is aiming to develop the site as a premier consumer protection brand, assisting Japanese makers in the manufacture of products of greater safety and superior quality. The Company will be trying to brand itself as an enterprise that not only assures quality from the developer’s vantage, but also provide a “Japanese quality” defect verification service from the perspective of end-users which fully meets the needs of the information and digital age. 

Reference
● Key Financial Data and Business Results (Consolidated)

No. of Shares Issued	Mar.11	57,885	Total Assets (¥million)	Mar.11	2,343
No. of Treasury Stock	Mar.11	0	Shareholders' Equity (¥million)	Mar.11	1,848
Market Value (¥million)	14-Jul-11	7,456	Interest-Bearing Debt (¥million)	Mar.11	12
BPS (¥)	Mar.11	31,929.1	Equity Ratio (%)	Mar.11	78.9
ROE (%)	Mar.11	15.0	Ratio of Interest-Bearing Debt (%)	Mar.11	0.0
ROA (%)	Mar.11	11.9	Free Cash Flows (¥million)	Mar.11	214
PER (times)	FY12/11 fcst	21.0	ROE=Current Net Income÷Shareholders' Equity		
PCFR (times)	Mar.11	22.4	ROA=Current Net Income÷Total Assets		
PBR (times)	Mar.11	4.0	PCFR=Market Value÷(Current Net Income+Depreciation)		
Share Price (¥)	14-Jul-11	128,800	Ave. Daily Vol.=Ave. Daily Vol. for the last 12 months		
Unit Share (shares)	Mar.11	--	Interest-Bearing Debts Ratio=I.B.D.÷Shareholders' Equity		
Average Daily Volume (shares)	14-Jul-11	196	Free Cash Flows=Operating CF+Investment CF		

(¥ million)	Net Sales	Operating Income	Ordinary Income	Net Income	EPS (¥)	DPS (¥)
FY3/08	2,372	336	319	169	9,942.30	0.00
FY3/09	3,378	641	643	347	6,035.86	500.00
FY3/10	3,416	521	526	306	5,303.32	500.00
FY3/11	3,957	528	495	278	4,820.11	750.00
FY3/12 1H fcst.	1,945	180	178	98	1,695.23	--
FY3/12 fcst.	4,509	645	646	355	6,143.43	500.00

Note: FY3/12 forecasts announced on May 6, 2011.

● Stock Price Charts and RSI


Source: Prepared by Trias Corp. with Bloomberg data.

Note: RSI, Relative Strength Index, is the index representing the ratio of overbought or oversold share prices.

In general, over 70 in RSI shows overbought share price range, while below 30 shows oversold share price range.

RSI=averaged share price appreciation for N days÷(averaged share price appreciation for N days + averaged share price decline for N days) x100

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