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INDIA'S NEXT ECONOMIC WAVE: ANIMATION AND INTERACTIVE MEDIA INDUSTRY

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I. Introduction

The liberalisation efforts by the Indian government have resulted in the emergence of numerous sectors, which offer great possibilities for India's development. One such recent sector is interactive media and animation, along with information and communication technologies (ICTs).

The animation and interactive media industry in India has been making headlines of late, not so much for its impact on the domestic market, but as a premier outsourcing destination for western animation companies. This paper examines the growth and development of the interactive media and animation industry in India. It discusses India's position and India's advantages in the global animation industry, the challenges that India faces in this industry, the path ahead, and opportunities for international collaboration in this sector.

II. India in the Global Animation Industry

The global animation industry is expanding fast. The Animation Council of Philippines estimates that the revenues from animation industry worldwide have been growing annually at 20% to 30% over the past few years. According to India's National Association of

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Software and Services Companies (NASSCOM), revenues from the global animation industry will amount to US\$50-US\$70 billion by end-2005. Today, animation products are increasingly used in films, TV programmes, commercials, games and online education. Following Walt Disney's 1988 production *Who Framed Roger Rabbit*, worldwide interest in animation feature films has been rising. Four major animation movies released in 2004 collected record revenues. Children's channels across the world have seen their numbers rising ever so rapidly in the last few years. Animation products also have applications in the medical, architecture, and legal fields.¹ The global non-entertainment animation industry, including work in scientific and medical animation, now accounts for revenues worth \$15 billion.²

The global animation industry is highly fragmented. There are about 7500 animation companies, but only a handful of them reap revenues of US\$1 million and above annually. The global animation industry is also witnessing major structural changes. Importantly, companies are outsourcing computer animation jobs in a big way. Any animation-related production in the United States or Canada is not exclusively produced in that country alone. Work is outsourced to many Asian countries like the Philippines, China, Singapore and India. These Asian countries are not only cost competitive, but are also high on quality and availability of skills. In addition to reducing their costs, western companies outsourcing animation jobs to Asia can tap the creative skills of Asian professionals.

Outsourcing of animation jobs produces several benefits for developed and developing countries.³ It democratizes the financing of animation. The industry is opened up to a much wider pool of independent creators. Outsourcing expands the market (leading to the creation of more movies, shows and games because of the lower costs); protects creative jobs and generates new employment opportunities in the developing world in an industry characterised by the boom and bust cycle of big budget productions.

¹ Estavillo, E. Maricel, 'Focus digital animation, medical transcription: sunshine ventures in business outsourcing', 7 September 2005, *Business World*.

² Anjali Prayag, 'Medical animation gaining importance', *Business Line*, 13 October 2005.

³ Macedonia has low wages, high unemployment, but near European levels of education and access to technology. In order to reap the benefits offered by the animation industry, the government in Macedonia has created e-information by wiring every school with computer labs equipped with broadband connection. FX3X, an innovative studio has proposed 3D@E-schools, a distance learning program. It has been a successful experiment with about 400 students attending the first level of training. See Brad deGraf, 'The Balkanization of animation', *Computer Graphics World* (www.cgw.com), August 2004.

India is a new player in the outsourcing of animation products. Till the past year or so, the post-production segments of Hollywood were outsourced to Japan, Korea and Taiwan. But very recently, India has become a favourite destination for outsourcing of animation jobs. Even animation companies in other Asian countries are outsourcing their jobs to India due to the high savings in labour costs involved. Global entertainment giants like Walt Disney, Fox Entertainment and Time Warner have been active players in the Indian market. MTV is considering India as an outsourcing destination next to Korea and Philippines. And Cartoon Network is buying programs made in India. Indian companies draw each scene, sketch each character and animate them on the computer after receiving the concept, storyline and script from the client. Then the overseas clients add the voiceover and music.

It is expected that India will be able to stake claim to an increasingly larger pie of the growing world market for animation products. According to India's NASSCOM, the animation production and services sector in India will generate US\$1.5 billion in revenues in this financial year (2005). A study by Anderson Consulting indicates that the Indian animation industry is expected to grow at an average annual rate of 30% for the next three years and reach US\$15 billion by 2008.⁴ In 2002, the Indian-made *Ali Baba and the 40 Thieves* was nominated for an Oscar.

Table 1: Animation Production, India and the World, Values in US\$ Billion

	2000	2002E	2005F
Total global animation production	31.5	45.0	51.7
Demand from Entertainment Sector	22.7	32.4	37
Demand from Non Entertainment Sector	8.8	12.6	14.7
Animation Production by India	0.6	-	1.5

E-Estimate, F- Forecast

Note: Non-entertainment comprises the industrial & commercial applications of animation

Source: NASSCOM Animation report

⁴ See Dhillon Amrit, 'Animated India joins the cartoon connection', 16 July 2005, *The Age*.

III. India's Advantages in the Animation Industry

India's attractiveness as an animation hub lies in the presence of an English-speaking workforce, high-quality software engineers, a large pool of creative talent, good studios and low costs. The cost of producing a 30-minute 3D animation programme in India is US\$60,000 compared to US\$250,000-400,000 in the United States and Canada. India has a cost advantage compared to the Philippines, which is another low cost producer of animations. The average monthly salary of an animation professional in India is US\$600 compared to US\$1,000-US\$1,200 in the Philippines. The cost of outsourcing one hour of animation work to India is estimated to be 30% to 40% of the corresponding costs in leading animation centres in Korea, Taiwan and the Philippines.

India's advantages in low costs have been exploited by many multinational firms and production studios. The advent of digital animation coincided with the liberalization of the Indian economy and India offered the benefits of lower production costs, strong creative and technical skills and a large English speaking population. This has led to the development of state of the art animation studios in several Indian cities, and these studios are collaborating with global entertainment companies.

IV. Indian Firms in the Animation Industry

Given the vast business opportunities, animation companies have mushroomed across India. The major centres for the production of animation and interactive media in India are Mumbai, Chennai, Bangalore, Hyderabad, Thiruvananthapuram and Kochi. These cities possess a unique combination of software expertise, production and animation expertise, and infrastructure, which are upgraded from time to time in order to meet international standards.

Major animation firms in India include Pentamedia Graphics in Chennai, Jadoo Works in Bangalore, CD India in Chandigarh, UTV Toons in Mumbai, Moving Picture Company in Film City, Noida, Heart Entertainment and Colour Chips India in Hyderabad, and Toonz Animation India in Thiruvananthapuram in Kerala. They also include Crest Communication, Maya Entertainment, Silvertown Studio and Dhruva Interactive. Ramoji Film City in Hyderabad has been involved in the making of Hollywood motion pictures by providing

equipment, crew, sets and post-production facilities. In Mumbai, ace director Subhash Ghai's Mukta Arts is building a network of global clients.

It is reported that the top ten animation firms in India conduct business worth US\$10-US\$12 million a year. Toonz Animation, for example, recorded revenues of US\$20 million in 2004-05 and projects a growth up to US\$30-US\$35 million in the next financial year. Maya entertainment, started in 1996 with eight animators, has now expanded to a 150 strong team. Tata Elxsi, headquartered in Bangalore, is also on a high growth path, with a strong network of over 20 offices worldwide.⁵

UTV Toonz has recently signed a three-year US\$10 million deal with the US-based animation distributor, BKN New Media, for the production of a series of animation products, including the 'Kong' series of serials and movies. Indian animation companies have been involved in the production of full-length animated feature films such as *The Legend of Buddha*, *Gulliver's Travels* and *Tommy and Oscar*. Crest animation has been involved in 40 episodes of a cartoon show called *Jakers*, *The Adventures of Piddley Winks* and *Pet Alien* on Cartoon Network. Rhythm and Hues (India), a subsidiary of the Los Angeles studio under the same name, has contributed to works such as *Scooby Doo 2*, *Garfield* and future releases including *The Lion*, *The Witch* and *The Wardrobe*.

V. Animation Products for Illiterates

The interactive media and animation industry in India has a large domestic market too to tap on. A field-study based research conducted by one of the authors in July-August 2004 on the diffusion of ICTs in India's rural areas offers some interesting results in this regard.⁶ The study showed that television is a highly popular medium as a source of information in the Indian countryside, as it combines visual and audio effects and is less demanding of the cognitive skills of the user. Almost 35 per cent of India's over 1 billion population is illiterate. There is great demand from this segment of Indian population for an innovative medium that facilitate communication and information sharing, while at the same time, being

⁵ See Pradeep, Priya, 'India toons into animation', *Siliconindia*, September 2005.

⁶ Thomas, Jayan Jose (2005), 'Informational Development in Rural Areas: Some Evidence from Kerala and Andhra Pradesh' in *Political Economy and Information Capitalism in India: Digital Divide, Development Divide and Equity*, edited by Govindan Parayil and published by Palgrave Macmillan Ltd., forthcoming (in 2005)

easily accessible to the masses via the television. Products of interactive media and animation can fill this demand gap to a large extent; they can be great tools for education, entertainment and awareness among illiterates in India's rural and urban areas.

VI. Challenges to Growth of India's Animation Industry

While it is true that India's animation industry is growing at a remarkable pace, the fact remains that this growth is largely a result of the mushrooming of "studios-for-hire." In animation feature films, for example, while Indian companies carry out the animation work, most of the writing, character design, and storyboarding are done abroad. India is yet to become a successful player in concept creation, the high value-adding segment of the industry which remains a preserve of western firms. India's advantages of low costs in this industry will be too short-lived, and sooner rather than later, the country will have to start developing its own intellectual property. There are several challenges faced by the Indian animation industry.

Lack of Finance

Indian animation firms cannot match their western counterparts in financial strength. It is pointed out that state support in the form of tax holidays is crucial for success in the animation business. Canada, for example, offers major incentives to its studios for developing animation products. However, financial institutions in India have not been much forthcoming in funding projects in animation and interactive media. The long gestation period before fruition of projects discourages potential investors. This can be a major hurdle, and it has, in fact, led to the stoppage of a few production ventures. For example, Jadooworks had to stop production of animated epic of *Krishna* due to technical problems and lack of funding. The firm was supposedly on the verge of bankruptcy and this has led to the retrenchment of about 250 workers.⁷ Interestingly, Jadooworks is the same firm which drew appreciation from Thomas Friedman in an article in February 2004 for employing traditional artistes and

⁷ See 'Jadooworks scripts its own tragic story, *Times News Network*, 13 December 2004, (<<http://infotech.indiatimes.com/articleshow/956947.cms>>)

transforming their skills to computerised digital painting – he was arguing that globalisation can have beneficial impact on traditional artists.⁸

The experience of Jadooworks underlines the fact that it is still too ambitious for Indian companies to single-handedly enter into animation projects. Even a small project in the animation industry entails a budget of US\$30 million, which is not affordable for Indian firms.

International Attention

Tata Elxsi Visual Computing Labs (VCL) in India tied up with Prologue Films in the United States to design the computer generated graphics for display at the academy awards in March 2004. This fact is not very well known. What this highlights is another challenge faced by the Indian animation industry – attention at the national and international level. While Indian animation companies do contract work for western firms, the entire credit, including ownership of copyrights, for the work goes to the western firm.

Paucity of Physical and Legal Infrastructure

As per the recommendations by a NASSCOM study, improvement of animation studios and better training for Indian animators are important for India's long term success in the animation industry.

India should develop an organized animation sector and also frame suitable laws and copyright rules. The infrastructural facilities have to be improved to attract more foreign investment and to enhance the efficiency of the industry. Also more emphasis has to be placed on the domestic industry as the domestic demand for animation in the entertainment; gaming and computer sectors are expected to grow multifold.

⁸ Friedman, Thomas. L, 'Animators draw global lessons', *Times Union*., 26 February, 2004, (downloaded from <www.factiva.com>)

Need For Training

"There are no academic institutes like Indian Institutes of Technology, Regional Engineering Colleges, Polytechnics, etc., churning out animators by the thousands. What we have are only fine arts schools which teach the fundamentals but not the technical skills required for production," points out K. Chandrasekhar, General Manager, Media Works, Tata Elxsi. According to him, this is a major drawback for the industry in India.

Education in new media has to be embedded into the mainstream curriculum. Students have to realise that they can have a lucrative career as animators, and the government as well as educational institutions have to start programmes for their career development. The animation sector will benefit greatly by giving encouragement to the community of traditional artists as much as to technically trained professionals. In other words, integration of the rural and urban talent will prove highly beneficial. Also, NASSCOM's President Kiran Karnik believes that there is a need for an animation academy to build a steady inflow of animation professionals in the industry. NASSCOM extended its help to the government for framing the curriculum and also work with the industry players to enhance the academic-industry interface.⁹

Government Support

Mr. Kapil Sibal, Minister of State for Science and Technology, identified animation industry as one of the important sector for India's export oriented growth.¹⁰ However, compared to governments in other countries, efforts by the Indian government to encourage the sector have been very minimal. The government of South Korea funds animation ventures on a partnership basis.¹¹ Bangladesh has a World Bank-funded support programme for the animation industry. In contrast, there have not been many initiatives from the Indian government to promote the animation industry, at least till the past one year.

The Indian government signed co-production treaty with France about 20 years ago and efforts are on to reactivate it. A treaty was signed with the Italian government, which in turn sent a delegation to Goa. Efforts are also on to sign similar agreements with Britain, Japan,

⁹ Interview by NASSCOM President Kiran Karnik on the current state and potential future of animation industry in India. (see www.animationexpress.com).

¹⁰ 'Extent of market depends on affordability, says Sibal', *Financial Express*, 28 October 2005.

¹¹ Peeyush Agnihotri, 'Suspended Animation', *The Tribune*, 14 July 2003, (<www.tribuneindia.com>)

Brazil, Canada, Netherlands and China. These treaties will lead to sharing of costs by partner nations and also the dispersion of technical know-how amongst the partner nations.

VI. The Way Ahead

According to a report by Goldman Sachs, India, Russia, China and Brazil, the BRIC economies, are the fastest growing in the world and India has the potential to become the third largest economy in the world. The Indian animation and entertainment sectors will reap benefits from the general economic growth in the country. India has the potential to become the global animation hub.¹² Indian animation companies are collaborating with international production studios and animation companies.

India has recently produced the first fully indigenous, full length animated feature – *Bhagmati*. This is a major step forward. Bollywood movies, with their colourful dance and song sequences, are now becoming popular in foreign markets, notably in western markets. It is possible that animated stories from Indian epics and folklores too will find a global audience. Toonz Animations created an indigenous production, *The Adventures of Tenali Raman*, which is today regaling television audiences in Singapore, North America and Europe – probably a sign of things to come.

Institutes for training in animation are springing up in different parts of the country. The Maya Academy of Advanced Cinematics, an animation and visual effects institute, opened its training centre in Chennai in June 2005. Picasso Digital Media has recently announced plans to set up two animation education and production facilities in Hyderabad and Delhi. These are all positive developments.

At the same time, Indian information technology companies are coming up with some innovative tools for the media and animation industry. For example, Beehive Systems has introduced a unique laptop-based solution for transferring superior quality video clips over low bandwidths from the field. Another company, Prologix Software Solutions, has created text-to-speech software, Vaachak, which has the capability to convert text in Hindi, English

¹² 'Huge scope seen for animation industry', *Business line*, 19 September 2005.

and other Indian languages into high quality, natural sounding speech. Cambridge Animation Systems' animo software is voted to be the most popular production software in India.

New Moves by the Private Sector

Ittina Group, a property development firm, has invested US\$5 million in an animation studio and school, Takshaa, in the Indian city of Hyderabad. The company plans to invest US\$20 million by the year 2007. The school has the capacity to train 250 students and boasts of inculcating traditional artistic skills in addition to software training. The team heading this venture is renowned for its contribution to the global animation sector.¹³ It is planning to collaborate with universities in Germany and Singapore to offer university programmes.

Maya Entertainment has collaborated with international clients such as BBC, Nickelodeon (UK) and Electronic Arts among others. Toonz Animation's top customers are Disney, Hallmark, Paramount and Marvel Pictures. It also has co-production agreements with Eva (France) and Viva Vision (Canada). Maya Entertainment was nominated for the 'Best Cinematics' award at the game developers conference for their work at the Electronic Arts School in 2004. It was also nominated for the Puldnella awards in animation for its work for the TV series *The Tale of Jack Frost* made for BBC. Tata Elxsi, in addition to the computer graphics work it did for the 2004 academy awards, also helped New York designers in their bid for the 2012 Olympics Games. Hungama TV (in which more than 80% of the capital is contributed by UTV) has plans to acquire overseas strategic investments. UTV has the option to invest up to 20% of the capital in a joint venture deal with Malaysia's Astro All Asia network for setting up a kids channel in Malaysia, Indonesia, Singapore and Brunei within three years.

Sun Network TV is planning to launch a kids cartoon channel in association with UTV. As per the discussions conducted so far, UTV will take care of the programming and marketing of the channel while the distribution of the channel will be handled by Sun TV.

Plans are on to create an Indian version of *Sesame Street* and the local version is expected to be called *Gali Gali Simsim*, and this will be launched on Cartoon Network. An educational

¹³ See 'Reality firm Ittina to foray into animation', *Business Line*, 6 October 2005.

research team led by Dr. Asha Singh is in the process of developing an innovative curriculum keeping the Indian kids in mind.

Animation Company Colour Chips has entered into an alliance with a South Korean government agency to explore possibilities for Korean film makers to tap the low cost technical expertise in India

Professional Bodies in Indian Animation Industry

The Animation Society of India (TASI) and Association Internationale Du film D'Animation (ASIFA) have been involved in various animation workshops and events since their inception. Experts feel that it is a very important time for the Indian animation industry, both for professionals and budding animators. Organisations like ASIFA India and TASI have been nurturing talented artists in the animation industry

TASI has been in the business for almost four years and has been involved in more than 80 interactive sessions and numerous full day workshops. According to TASI secretary, Ranjith Singh, the objective of TASI is to promote the cause of animation industry through collaborative efforts with other organizations.'

ASIFA, the only internationally recognized organisation for animation, has opened up its first ever national chapter in India. The Indian chapter of ASIFA will be located in the Toonz Studios in Techno Park, Trivandrum. The need for creating more awareness about the animation industry among the public and market players was stressed by ASIFA. It will act as a manpower consultant providing artists to studios around India. It has also given a representation to the Indian Government to recognise the animation industry as a part of the information technology industry.

New Government Initiatives

A 25-acre Special Export Zone (SEZ) is going to be constructed in the outskirts of Thiruvananthapuram exclusively for the animation industry. The commerce ministry is said to have approved the creation of the SEZ within the Film and Video Park (FV Park) set up by the Kerala Industrial Infrastructure Development Corporation near Thiruvananthapuram. The

state government is said to have created a 15,000 sq metres animation facility to welcome animation houses to create their bases. The FV Park made a good start when the Chennai-based Prasad Labs has made it its base to process all Malayalam films for the next two years. Kerala has been making efforts at convergence in the areas of information technology and cinema.

‘Ready to go? Animate’ is a new animation academy in Kolkata. This offers programmes in basic and advanced 2D and CG (computer generated) animation with a curriculum that focuses on hands-on training. An alliance has been formed with Los Angeles-based Gigapix Studios to facilitate technical support, co-production and co-finance animation projects. The state government of West Bengal is providing much encouragement to the animation industry.

The Animation Production Association of India recently suggested to the Information and Broadcasting Ministry of India that all TV channels must ensure 10% reservation for local animated content. The government can further encourage investments and participation in this sector by providing tax benefits. It can provide grants to Indian animators for participation in international conference and for taking up training programs abroad.

VII. Opportunities in Collaborations

Indian companies are trying to improve quality and making attempts to compete globally with the market leaders in the industry. It is said that the year 2004 is a watershed for the Indian animation and gaming industry (according to the Federation of Indian Chambers of Commerce and Industry [FICCI] report on the Entertainment Industry). The year was marked by increased use of animation in the Bollywood segment. According to the FICCI report, the increasing demand for downloads of games on mobile phones will enhance the opportunities for gaming companies and bring in new entrants.

Several Indian companies are entering into collaborations with foreign new media companies, which outsource their work to the Indian companies. Recently, Toonz Animation floated a joint venture with First Serve International LLC, a global media company which aims to produce and distribute top-notch animation programming for the world market. The new

venture will be headed by former Walt Disney executive Ed Borderding. In 2004, a Chinese company also invested in India Games Ltd.

Toronto-based entertainment products company Kahani is collaborating with Mumbai based Animation Bridge. In this venture, Kahani is expected to invest US\$30-US\$40 million over the next three years to engage in film production. The storylines and scripts will be completed in Canada whilst product development and promotion are expected to be done in India. The company is also planning to tie up with Bangalore and Hyderabad-based studios. Zee's animation arm, Padmalaya Telefilms, has signed a US\$14 million contract with Italian producer-distributor, Mondo TV, to co-produce four new animated series. Padmalaya also has collaborations with British animation companies Mallard Media and Ealing Animation.

International Cooperation in the Animation industry

The Indian government is signing co-production treaties with other countries. Professional organisations too are trying to promote the Indian animation sector abroad. ASIFA, India, organises film festivals, conducts workshops and animation film competitions at the international level. Kahani and Animation Bridge have showcased their animation shows at Cannes Mipcom (a summit where mobile, broadband and interactive professionals from 95 countries interact with broadcasters, producers and distributors) in October 2005.

X-media Lab has been floated to help local, independent digital media producers reach their ideas successfully to the market with assistance from outstanding international new media professionals, who act as mentors to the companies and project teams. The second lab held in Singapore from 17 – 19 November 2005, "Creating Successful Computer Games", attracted worldwide response. Indian developers have also been invited to interact with eight of the best games people in the world. There is also a plan to do a lab in India next year.¹⁴

According to Mohit Anand, Country Manager, Microsoft Entertainment and Devices Division, Microsoft India, "Gaming in the last 7-8 years has really come a long way but it still has a long way to go. Critical factors like PC penetration, organised retail, broadband, and gaming hardware need to be addressed to help the industry. Those factors are gradually

¹⁴ See interview with Brendan Harkin of X media lab in <www.indiatimes.com/anex>

changing and the future definitely looks bright. India is the youngest country in the world, and the new generation is completely tech savvy. We believe that gaming is definitely here to stay and evolve.”¹⁵

What are the opportunities for engagement between India, Singapore and other Southeast Asian countries in the field of interactive media and animation industry? To begin with, Singapore and Southeast Asia will be an important market for products from India’s animation industry. Singapore has significant expertise in telecommunication and media industry. Harnessing the favourable trade and investment climate offered by the Comprehensive Economic Cooperation Agreement between the two countries, firms in Singapore should consider investing in India’s animation and media business. Maya Academy of Advanced Cinematics, a leading player in the Indian animation industry, is planning to extend its operations to Singapore. It is currently working on a project for BBC and has also been involved in the video games division.

Entertainment is one of the fastest growing sectors in India-ASEAN relations. The entertainment industry is expected to grow at a compound annual growth rate of 20 percent from 2002 to 2007. The entertainment industry, with total revenues of US\$3.6 billion in 2002, is projected to grow up to US\$8.7 billion by 2007. ASEAN is a big market for Indian films. There are tremendous collaboration opportunities between India and ASEAN in the area of 3D animation, graphics, etc.

The Philippines was, until recently, a fast growing animation industry, rich in creative talent, and it was a major destination for outsourcing by animation firms in the United States. However, with rise in costs, the animation industry in the Philippines has begun to decline, and Filipino workers in the industry have been migrating to India and Singapore in search of jobs. India, the Philippines, Singapore and even China must realise that there is little to be gained in the animation industry in the long run by competing with each other on costs. Rather, they should seek avenues for cooperation, and direct their efforts at acquiring intellectual property rights in this creative industry.

¹⁵ See the interview in <www.indiatimes.com\anex> (17 November, 2005).

VII. Conclusion

The Indian interactive media and animation industry has seen tremendous growth in the last year or so. It is fast emerging from being an outsourcing destination for western animation companies to develop and showcase its own capabilities and potentials. The emergence of various industry-related organisations and companies, and the availability of affordable and talented expertise, point to tremendous potential this sector has to offer.

Whilst there are internal challenges to the Indian interactive media and animation industry, given the efforts being undertaken by the government and like-minded organisations, it will be sooner rather than later, that India lays a strong claim as a major international player in this industry. It is thus opportune for Singapore and countries in the region to identify potential opportunities for collaboration so that we are able to ride on the waves of the Indian interactive media and animation industry.
