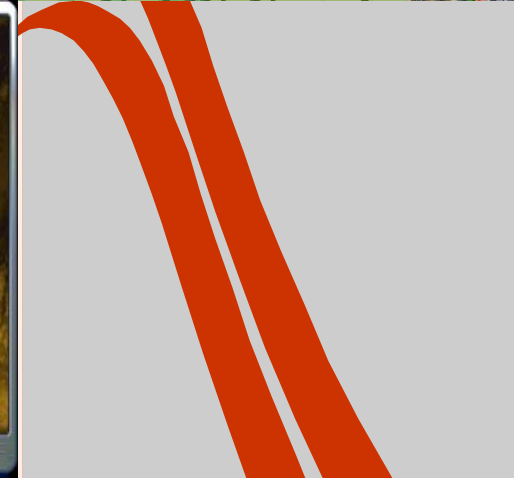


Computer Animation and Gaming Industry



Adeel Ghayur

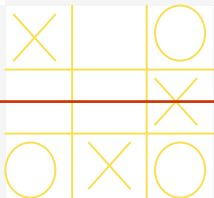




Scheme of Presentation

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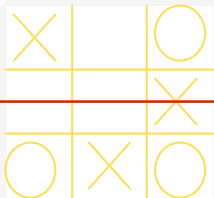
- Introduction
- World Wide Computer Game Industry
- World Wide Animation Industry
- Country Strategies
- Pakistan
- Four Pillar Strategy
- Conclusion



Introduction

19-Sep-07

- A century ago, we learned cricket from the English and went on to become one of the top playing teams in the world
- This century, we need to repeat the same but in a different type of game:
 - “Computer Game”
- Computer and video game industry began with the birth of Atari in 1970s
- Today product development is not keeping pace with the surging demand
- Developed countries have recognized this untapped potential and are heavily investing time, money and efforts to establish themselves as leaders
- Computer Animation and Computer Game used to be two different industries but both are fast merging into one
 - Each industry is worth nearly US\$ 30 billion
- Countries like Singapore, India, China, and Korea have developed strategic plans with the aim of developing these industries

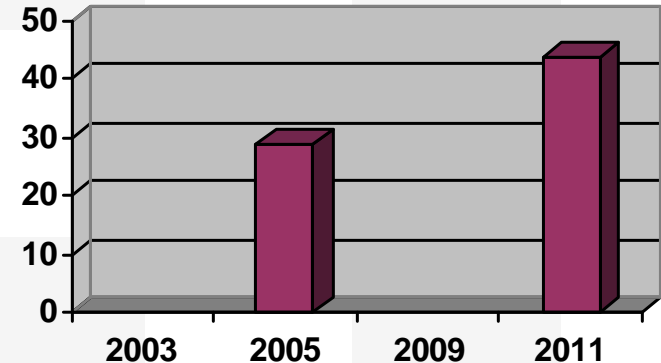


Computer/Video Gaming Industry

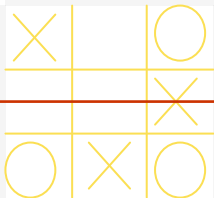
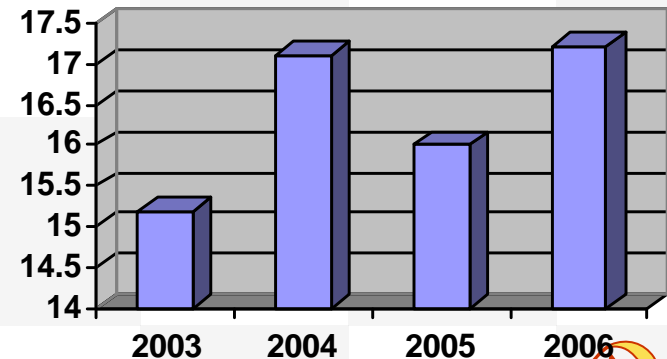
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- Global Industry
 - US\$ 29 billion in 2005
 - US\$ 44 billion in 2011
- US Industry
 - US\$ 17.2 billion in 2006
- Computer Game industry is an amalgam of numerous industries:
 - Online games
 - In-game advertising

Global Industry



US Industry





Online Games

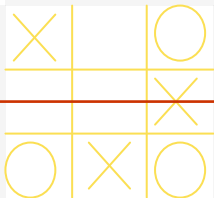
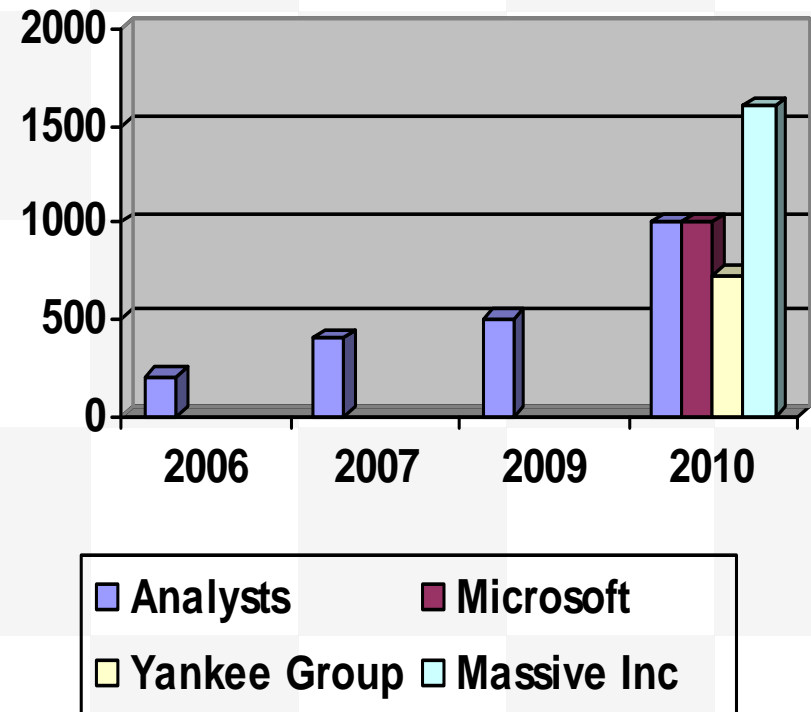
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- Fastest growing phenomenon in the gaming world
- US\$ 3.4 billion in 2005
- Over US\$13 billion in 2011
- China fastest growing market expected to grow from US\$ 1 billion in 2006 US\$ 4 billion in 2010
- Between North America, Japan, South Korea and China, they cover nearly 95 percent of the current world market.

In-Game Advertising

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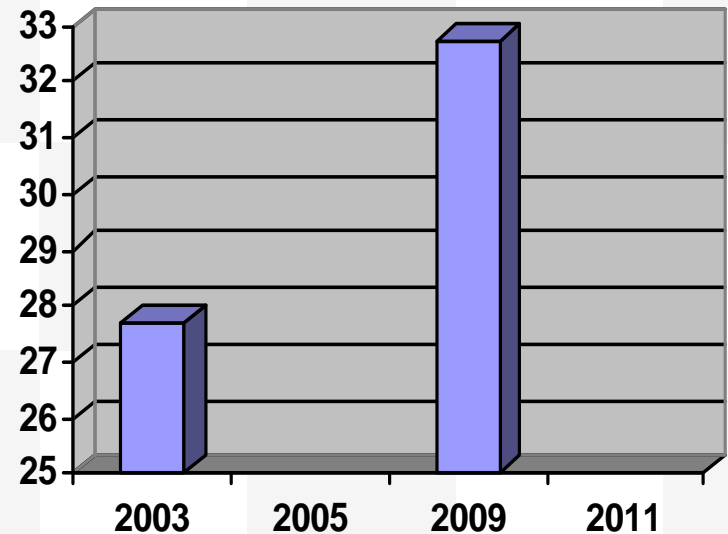
- Advertisement placed within the computer and video games
- Market share was US\$ 200 million in 2006
- Expected to grow to a billion dollars by 2010



Animation Industry

19-Sep-07

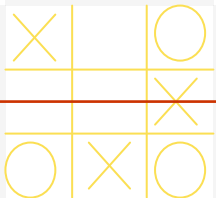
- US\$ 27.7 billion in 2003
- US\$ 32.7 billion plus by 2010
- Animation studios in UK, France, Germany and Spain are market leaders in Europe
 - Major milestone was partnering of European animation studios with the TV channels to produce animation content for them
- In Asia, Japan and South Korea are leader
 - India, China, Singapore, Malaysia and Vietnam have started to show strength



Country Strategies

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- Singapore;
- India; and
- China

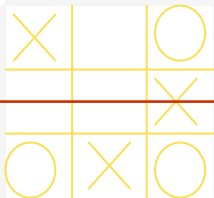




Singapore

19-Sep-07

- National Research Foundation's allocation of S\$500 million for the years 2006-11
 - Fund development of a strategic digital media research program and the setup an agency
- August 2006 – the Interactive and Digital Media Research & Development (IDM R&D) Program Office is setup
 - Purpose to initiate digital media research and help in the growth of local digital media industry



Singapore cont...

19-Sep-07

- The IDM R&D Program Office has devised a four initiative formula for effective industry development involving all stakeholders i.e. the industry players, universities, the consumers and the public sector:
 - Drive Demand for Digital Media Services
 - National and International Research Network
 - Encouragement of Innovative Ideas
 - Establish Singapore as an International Test-Bedding Centre



Singapore cont...

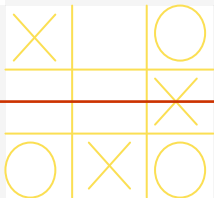
19-Sep-07

- **Drive Demand for Digital Media Services**
 - Attract companies to invest in research and development opportunities by anchoring and jumpstarting the demand for digital media services
 - including proposals in applications, services and platforms with the potential to generate new business models and drive new demand for digital media services
- **National and International Research Network**
 - Grow a network of national and international research organizations to augment the capabilities of Singaporean digital media sector
 - Call for research proposals from universities and research institutes which address the local industry issues related to digital media
 - Work with the best research institutes of the world
 - In October 2006 Singapore-MIT International Game Lab (SMIGL) was established as a result of cooperation between MDA and Massachusetts Institute of Technology (MIT)

Singapore cont...

19-Sep-07

- **Encouragement of Innovative Ideas**
 - Generation of innovative ideas and projects from the public in the digital media sector
 - i.Jam – an online jamming platform via which public is encouraged to contribute ideas and explore R&D projects in digital media area
 - The ultimate vision of i.Jam is to provide a platform which not only captures new and innovative ideas but also nurtures them into projects.
- **Establish Singapore as an International Test-Bedding Centre**
 - Aim to develop Singapore into an international test-bedding centre for interactive digital media related infrastructure and applications
 - IDM R&D Program Office has given a call for proposals of original and innovative applications or services with viable business models

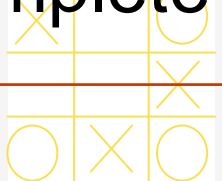




India

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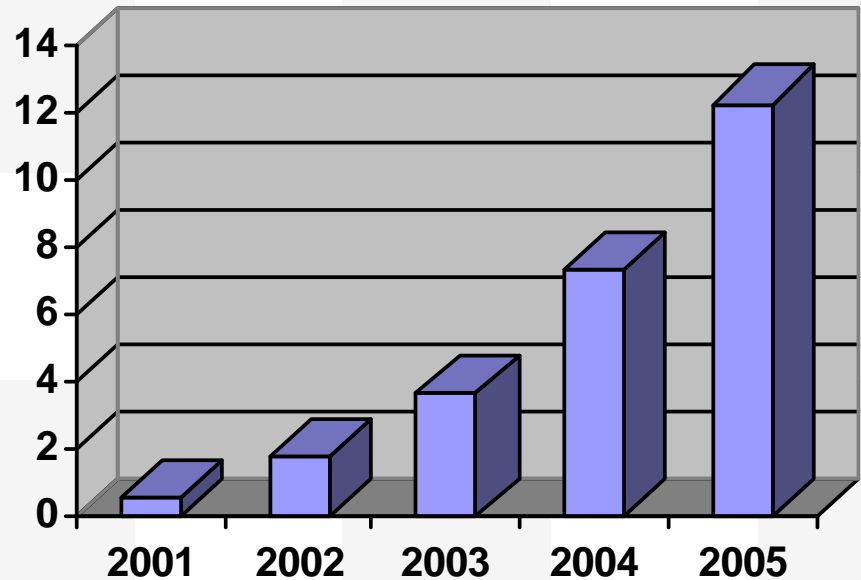
- Indian animation industry stood at US\$ 1.5 billion in 2005
- Academia, industry and the Government working together with one vision to mushroom a creative gaming/animation culture in a conducive environment
- In 2006 India had 300 animation companies with 16,500 people working in this area
- In 2004, the first animation studio in India, Toonz Webel Academy was setup
- There are also programs being carried out in which scholarships are awarded to the students to complete animation courses



China

19-Sep-07

- Between 2001 and 2005, China's digital media market jumped from \$0.5 billion to more than \$12 billion
- this industry is expected to maintain high growth over the next 5-10 years
- China's computer game market scale crossed US\$ 1 billion in 2006 and is expected to reach US\$ 4 billion in 2010



China cont...

19-Sep-07

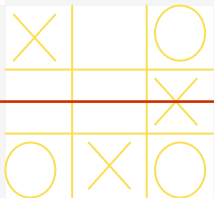
- Chinese Government has three online game and animation development zones in different cities:
 - National Network Game and Cartoon Industry (Beijing) Development Zone in Beijing's Zhongguancun area;
 - Chengdu; and
 - Guangdong.
- These special zones offer attractive tax incentives and company setup benefits to game and animation studios

Pakistan

19-Sep-07

- **Current Standing**

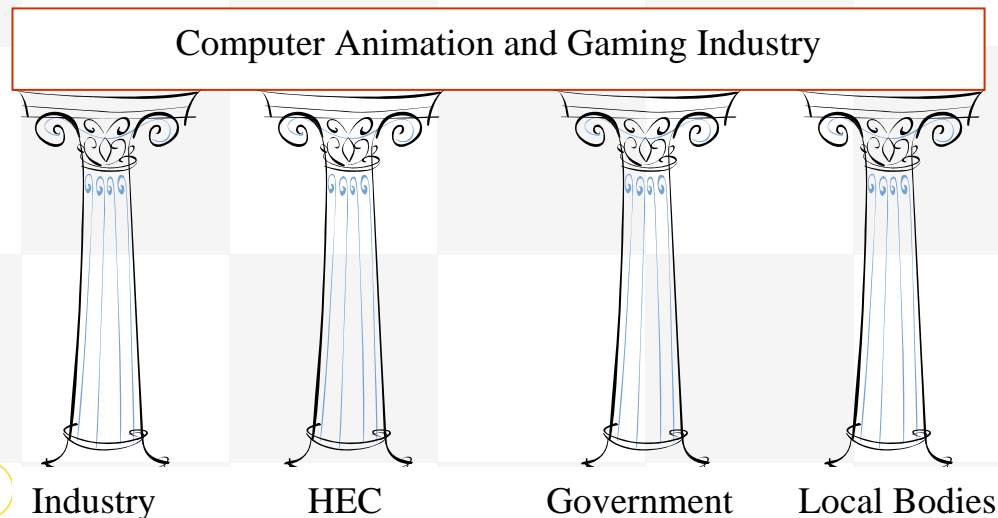
- Nearly no standing in the international computer game and animation industry
- Until very recently, all of the animation content played on TV channels was also imported
- Recently, there has been some growth in the animated advertisements, but the size is negligible
- There isn't any university or institution which awards degrees in this area
- In 2004 National College of Arts was provided with technical and financial assistance from the Federal Ministry of Information Technology to train over 3000 professionals in the field of computer graphics and animation
- PSEB took a delegation of companies to Korea to work with the leading computer graphics companies in Seoul and started an apprenticeship scheme to enable the smaller companies to hire apprentices and train them at government expense for four months



Pakistan cont...

19-Sep-07

- The full potential of computer game and animation industry stays unutilized
- We propose a Four Pillar Strategy in which the Government and industry work together with the goal of spawning a successful computer animation and gaming industry
- Four pillars identified are:
 - HEC, Government, industry and the local bodies



Four Pillar Strategy

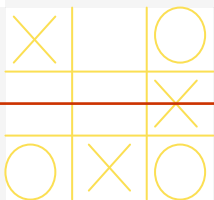
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Short Term Goals	Long Term Goals
Introduction of computer animation and game courses in a university or establishment of a university with public/private partnership for courses in the said area	Center of Excellence in computer game/animation Gaming/animation degrees in major universities across Pakistan
Incubation center/ technology park within the university	More than two technology parks
100 graduates every semester within two years	1,000 graduates every semester
Reaching the mark of 100 animation/ gaming companies	Reaching the mark of 500 animation/ gaming companies
Publication of research papers in international journals	National animation/gaming journal and magazine

Higher Education Commission (HEC)

19-Sep-07

- Either degree and training courses in computer animation and game are started in a university or a new institute for the said purpose is set up
- Done under public/private partnership (PPP)
- Setup in a year's time with a goal of starting operations by the end of the year
 - Development of a highly qualified faculty for the institute/s is crucial.
 - Adequate resources would be required to train a new breed in these areas and this also fast tracked
 - Sending abroad for higher studies would be an important enabling measure. It would also be looked into if the PhD time of the scholars could be divided between their degree institute and the home institute.
 - Another incentive could be in the form of scholarships for the students willing to study computer game and animation degrees. This would help produce bigger number of quality graduates in a shorter time.
- Organization of national and international conferences on the subject would further the cause as well



Industry

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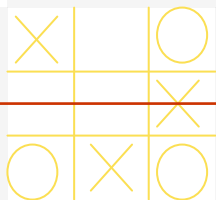
- Industry has to take initiative
- Industry initiative and HEC support to setup an institution
 - An incubation or a technology center
- Creation of some sort of digital entertainment organization with all gaming and animation firms as its members
 - To set standards, carry out research activities, help new members, promote Pakistani firms internationally, organize international collaborations, and liaison with the Government
 - Can operate on funds from both the industry and Government
 - Firms can agree on donating a part of their profits to the organization, while the Government can periodically provide research funds to it.
- Creating collaborations between IT firms and TV channels to produce animation for them or may be even starting a completely new animation channel.



Government

19-Sep-07

- Support in the form of tax exemptions, international exposure of the industry and its promotion
- Establishment of an interactive and digital entertainment industry tax free zone
 - Based on the experience, additional zones in different parts of the country may be established
 - Zone(s) should be selected with built-in flexibility to accommodate future growth and industry expansion in terms of: area, provision of utilities and physical infrastructure.
- Research is the backbone
 - Government would need to provide research funds to the industry
 - Use of this fund needs to be based on a mechanism that adequately integrates the private sector and representative of the industry.



Local Bodies

19-Sep-07

- The local bodies are crucial in setting “technology parks” and the “tax free zones”. Setting up of incubation center(s) near commercial areas would be greatly helped with the participation of local bodies
- Also provide help in ensuring building and maintaining necessary infrastructure.



Conclusion

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- Stay “relevant” and develop the “niches”
- Develop innovative ideas
- Development of computer game and animation industry in the context of a surging market is one such dimension
- A collaborative mechanism between the industry, Government, local bodies and institutions of higher learning
- The goal of establishing a computer game and animation industry needs to be vigorously pursued
- Efforts need to be made for the “joint ventures” and in becoming part of the “supply chain”.

