



# INSIGHT

*Anticipating the Future... Assessing the Impact*

## IPRO 341

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# Agenda

- Objectives
- Future
- Acceleration of Growth
- Importance of This Project
- What was the process?
- Lifecycle Models
- Complex Systems
- Similar Impacts
- Our Conclusions
- Future Semester Plans



# Mission Statement

- Investigate future technologies and their intended and unintended consequences.



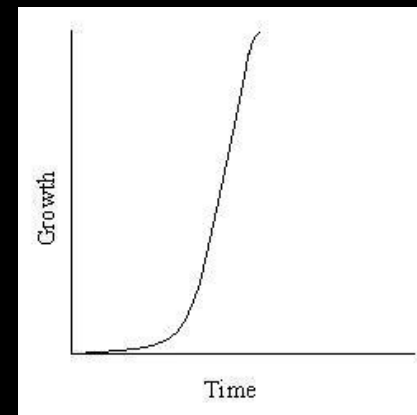
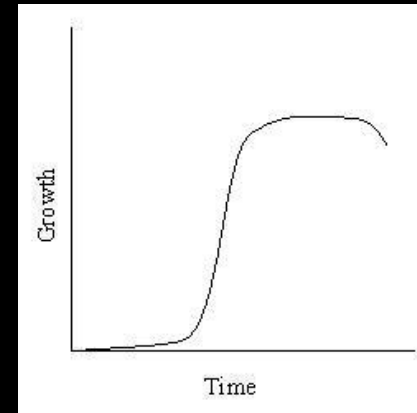
## Objectives

- Provide a foundation for future iterations of this IPRO
- Collect data on four recent pervasive technologies
- Research the lifecycle models of those technologies
- Establish commonalities between the technologies



# The Future

- Change from S-curve to J-curve
- Decentralization of Information
- Globalization
- Acceleration of growth





# Acceleration of Growth

Generations Ago	Development
100,000	Speech
750	Agriculture
500	Writing
400	Libraries
40	Universities
24	Printing
16	Accurate Clocks
5	Telephone
4	Radio
3	Television
2	Computer
1	Internet/e-mail
0	GPS, CD, WDM



# Importance of This Project

- Better information may lead to wiser choices
- Improve awareness of impacts of emerging technologies



## What was the process?

- Literature Survey
- Research recent technologies and their lifecycle models
- Research societal impacts
- Compare significant trends
- Hypothesis

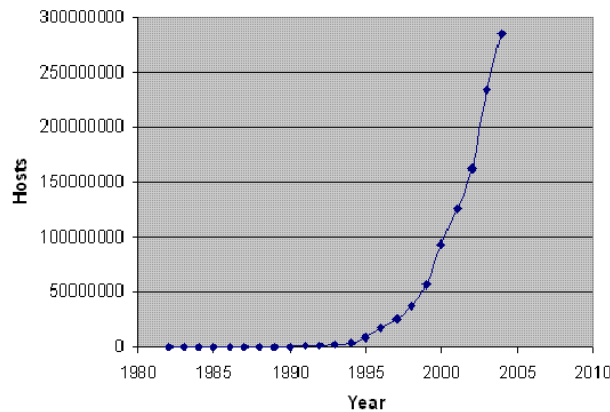
*Can these trends be applied to the future?*



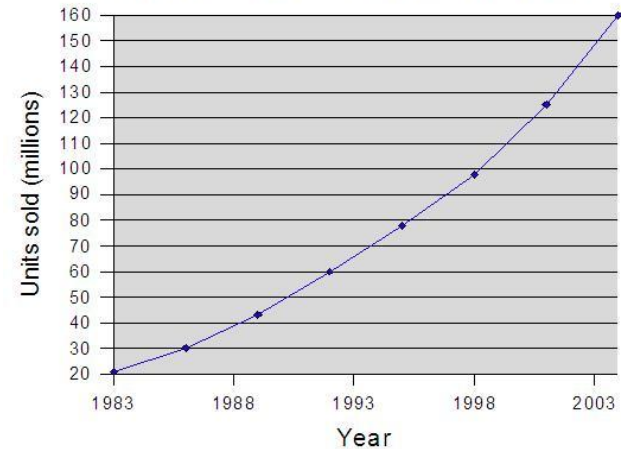


# Lifecycle Models

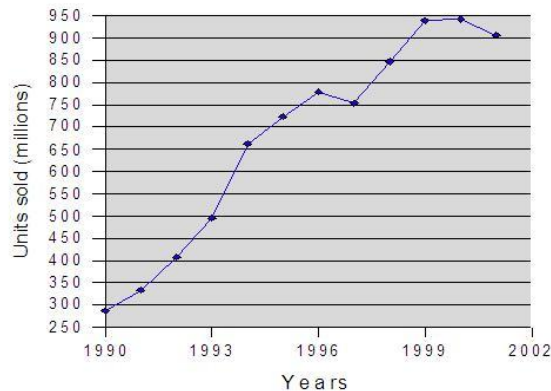
**Internet Hosts by Year (1982-2004)**



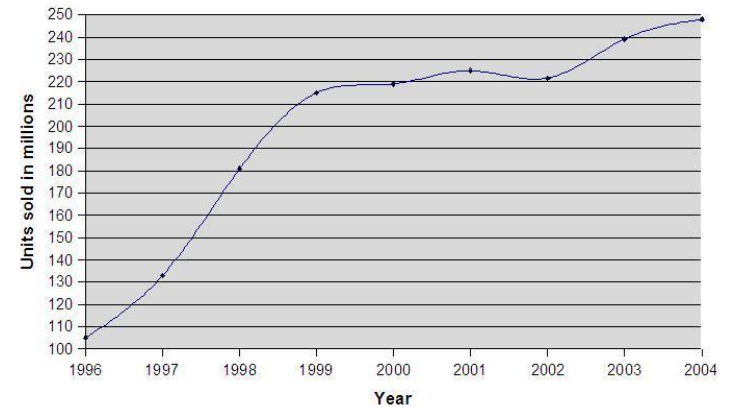
**Growth of Cell Phones in the US**



**C.D. Sales Growth**



**Computer and video game unit sales**

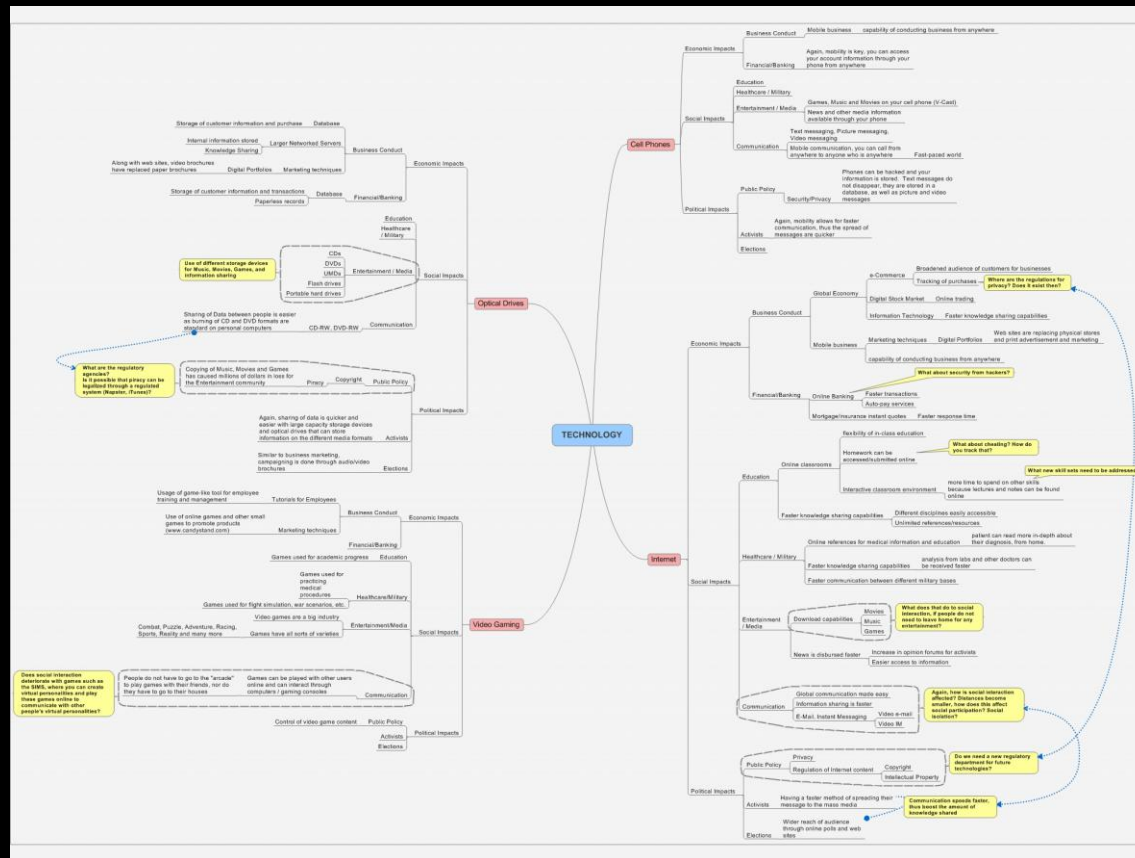


Source: <http://www.azoz.com/music/features/0008.html>

Source: [http://www.theesa.com/facts/sales\\_genre\\_data.php](http://www.theesa.com/facts/sales_genre_data.php)  
The NPD Group

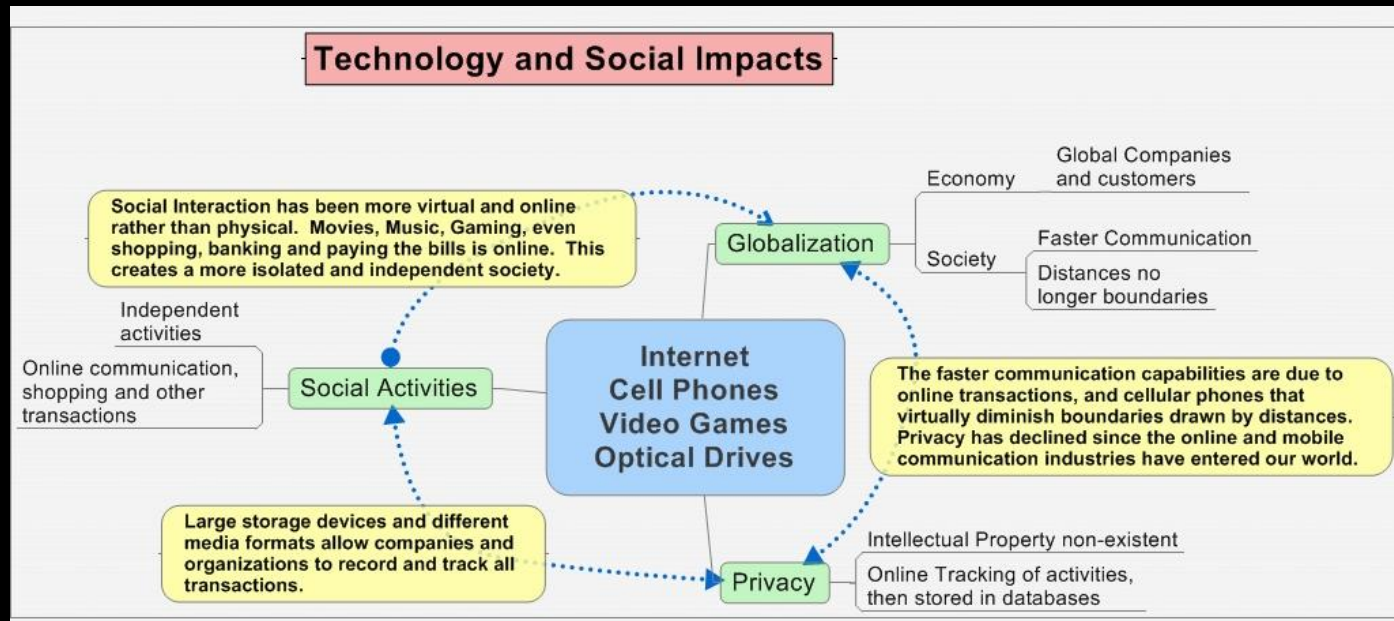


# Complex Systems





# Complex Systems





## Similar Impacts

- Globalization
- Privacy
- Social Activities
  - Education
  - Communication
  - Shopping / Banking
- Convergence

*Did the developers think of the impacts of their research? Could they predict what would happen?*



# Conclusion

- Major Disruptive Change
- Transitory Technologies
- Unforeseeable Impacts



## Future Questions

- We have uncovered more questions.
  - Do we need to regulate emerging technologies in an attempt to prevent unwise decisions? Is it even possible?
  - What role does research ethics play in the development of new technologies?
  - Does the public need to be more involved in the discussion of implementing emerging technologies? Is the public even aware?



## Future Semester Plans

- Focus on nanotechnology next semester
- Future semesters may focus on:
  - RFID
  - Biotechnology
  - Artificial Intelligence
  - Intelligence Augmentation
- Generalization of Models and Trends
- Spawn public discussion forum



## Special Thanks

- **Doctor Peter Lykos**, Professor of Chemistry, IIT
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- **IPRO Department and Staff**
- **O'Connor Design Works**





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## Question and Answer