



# The Centrality of Common Criteria in a World of Advanced Technologies

Lior Carmi, CISSP

Standards Institution of Israel

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## Introduction

- Questions for people having IT background without Information Security background and for those who have good Information Security background without deep general IT background:
- We live in an era of advanced and developing technologies and systems. Why and how did information security become so important component and what is the role of Common Criteria in this context?



## Introduction

- This presentation considers those questions and provides some answers for three major aspects, influence each other –
  - Information Security became eminent part of systems based and function in advanced and developing environment. Why did it happen?
  - There is no way to stop or reduce the need and dependency of systems in Information Security.
  - Bearing the two former aspects in mind, why does Common Criteria put Information Security in a better place for a more secure world.



## Forecast and International Trends

- According to analysts and consultants from the most esteemed organizations involved with information technologies, two fields will be the leading domains up to 2012 –
  - Information Security, and
  - Storage
- This forecast gets along with market trends of information technologies around the world, and their most prominent characteristics which are:
  - Increasing of computer processing power
  - Decentralization of systems



## Increasing of computer processing power characterizes Advanced Systems

- There has been a tremendous increasing of computer processing power since the 1960s.
- A classic example depicting the evolution of computer processing power use.
  - The example compares between the processing power was used for controlling the launch of apollo 11 to the moon at 1969, with the processing power of a computer today, in a ten years old child room.





## **Increasing of computer processing power characterizes Advanced Systems**

- The launch of the spaceship in 1969 consumed less processing power than an average computer of today.
- The processing power increase was achieved during relatively short period of time.

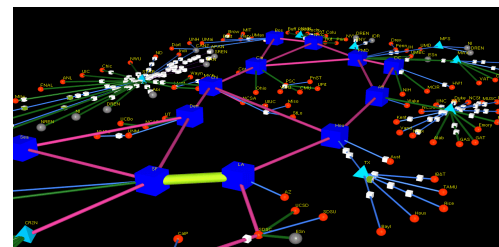


## Systems are characterized by decentralization, especially during the last two decades

- Roughly twenty five years ago, the only computers were mainframes.
- This was a closed environment.
- Today we have a distributed and interconnected world.
- Client-Server architecture and the internet are examples of the decentralization process of systems during the years.



A mainframe



A distributed system



## How come Information Security became an issue?



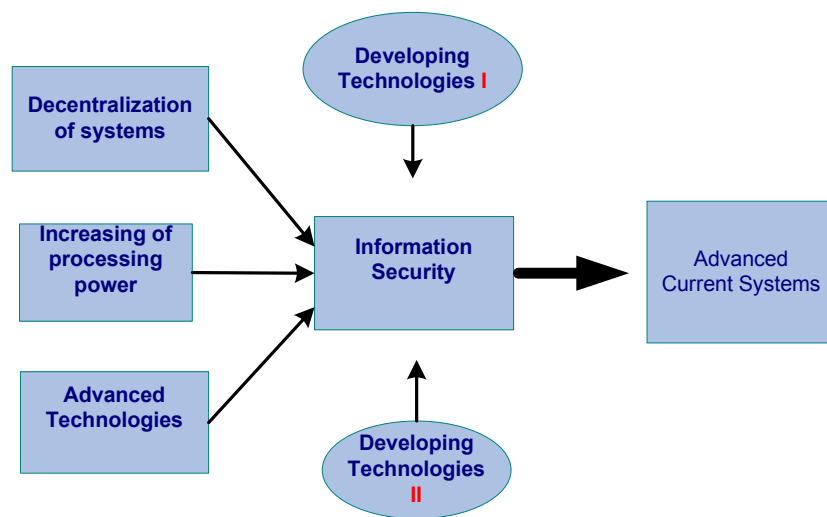
- Systems became more and more decentralized along the years.
- Parallel to the fact above, there was increasing in computer processing power.
- Processing and computer power were brought closer to the user.
- Personal computers became more efficient and continually took on more tasks and responsibilities.
- People and businesses have come to depend greatly upon computer technology in civilian society, military defense systems, financial institutions, medical equipment, etc.
- This level of dependence has made security a much more necessary and essential discipline.





## How come Information Security became an issue?

- The place of Information Security is becoming more important as time pass, and this trend will continue by positive acceleration in the future.
- Information Security is the glue between developing technologies.



The place of Information Security  
in the Information era



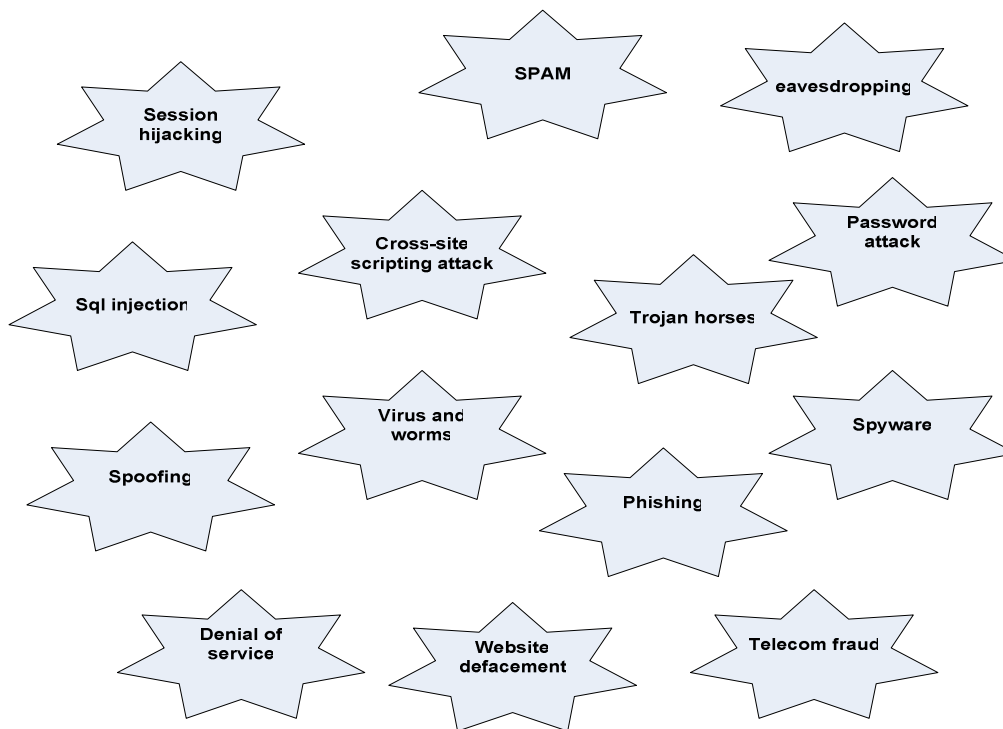
## **Information Security Field is developing and coping with emerging challenges**

- Along with development of technologies, the world of information security is evolving.
- There is a dramatic increasing in the number of security threats, their kinds, quality, and the frequency that they are expressed.
- Today, and during the last years, awareness for information security importance increases.



## Information Security Field is developing and coping with emerging challenges

- Information Security copes with different challenges, coming from application security discipline, and traditional network and system security.





## **Information Security Field is developing and coping with emerging challenges**

### The Vendor

- On the basis of all those facts, companies supply solutions, or just try to supply solutions.
- They try to bestow value and express the role of Information Security.



## How can a company decide, if and what product to buy?

- Before making a decision, what product to purchase, few stages and processes must occur within the company.
- Business objectives must be the starting point.
- The next major stage is performing a Risk Analysis.
  - Risk analysis includes:
    - Identify assets and their values.
    - Identify vulnerabilities and threats.
    - Quantify the probability and business impact of these potential threats.
    - Provide an economic balance between the impact of the threat and the cost of the countermeasure.
- One possible outcome of the risk analysis is handling the risk and deciding on a safeguard.
- In many cases the safeguard is a product from a vendor.



## Do we really ready to decide what is the product that fulfill our business objectives?

- Many companies do not start from business objectives, and do not perform risk analysis.
- The best case is that risk analysis process took place, purchase is justified and we begin with product choosing.  
Everything apparently is OK.
- But, pay attention. We let machines running software that implements information security functions, to fulfill the outcome of the risk analysis process.
- The logs describing events in the system, and triggers initiating alerts, are also depending on the machines.
- Did we miss something?
- What can we count on ??



## Doubts during the way to decide on suitable product

- Deciding about a purchase of a product is a serious task, not just because of its cost, but mainly because of the risk of losing assets, in case it doesn't fit our expectations.
- The act of selecting a product is not trivial and should consider the following:
  - The ability to cope in a world of advanced and sophisticated systems.
  - Rapid change of technologies.
  - Rise in security threats number.
- Many vendors offer the potential purchaser, similar products and solutions. They will promise you almost everything you want to hear. It is like walking in the jungle.



## What or who can we count on?

- Can we count on the CTO or the salesman of a vendor which offer us product, that it will do its role in a sufficient way?
- What if they didn't tell us all the truth regarding the abilities of the product. Maybe they "forgot", or maybe even they don't really know the whole true.
- We should count on unbiased and free of interests side.
- We have available choice and its name is Common Criteria.





## Knowing the Common Criteria from business and technological point of view

- Common Criteria is adopted by IT community generally and the IT security industry in particular.
- CC helps with reducing the gap between what we want and what we get.
- Vendor can segregate itself from other vendors.
- Common Criteria is one of the most valuable and accepted methods today.
- It assists in ensuring information security exists and implementing its role in a trusted qualitative manner.



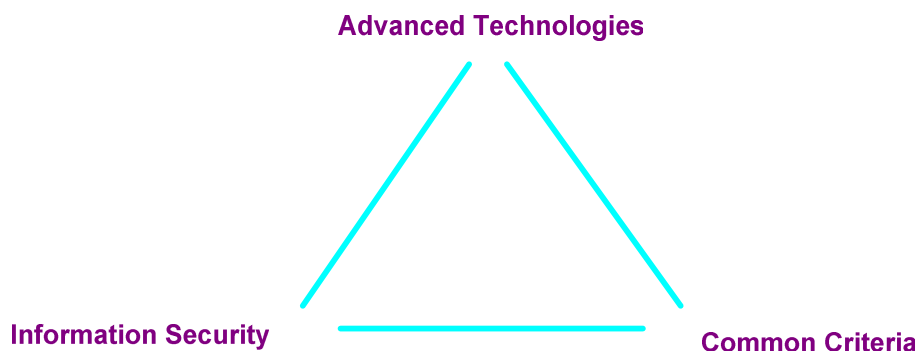
## What is the essence of Common Criteria in our context?

- CC forecasts, in what extent the product planned to be purchased and assimilated later, can keep our precious information confidential, available and reliable.
- It does so by evaluating the level of trust we can give in a developed product.
- The rating of a product by a known scale can help in comparing between different products from different vendors.
- CC put information security in a better place.



## Advanced Technologies, Information Security and Common Criteria

- Talking about the strong connection between information security and advanced technologies as was described by the former slides, adding the importance of common criteria, for information security success, we have the following relations -





## Nothing is perfect, neither Common Criteria

- Some of the difficulties of CC:
  - CC supplies rating of a product, just in a defined environment, not covering variety of possibilities.
  - Costs too much.
  - Takes too long to finish.
  - Too complex.



## Nothing is perfect, neither Common Criteria

- Requires too much documentation.
- There are good answers to the points mentioned above – still, they are out of the scope of this presentation.



## Conclusion

- The centrality and importance of Common Criteria in a world of advanced technologies where Information Security plays so eminent role, can be recognized.
- Common Criteria is not flawless, yet is the best we can have today.
- If Information Security is the glue between developing technologies, Common Criteria is one engine participating in this process, internationally.



# Thank You!

## Questions?

**Lior Carmi, CISSP**

**Tel Aviv, Israel**

**Email: [lior\\_carmi@sii.org.il](mailto:lior_carmi@sii.org.il)**