

The background features a sequence of five silhouettes representing human evolution, moving from left to right. The first silhouette is an ape-like creature. The second is a more upright hominid. The third is a modern human carrying a spear. The fourth is a modern human holding a knife. The fifth is a modern human looking at a smartphone. The background is a gradient of blue with white diagonal lines and a white triangle in the top-left corner.

THE (R)EVOLUTION OF I.T. IN THE SHIPPING INDUSTRY

The (r)evolution of I.T. in the Shipping Industry- George Efthimiou

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(R)EVOLUTION MEANING

1. A gradual process in which something changes into a different and usually more complex or better form.
2. A result of this process; a development.
3. Change in the genetic composition of a population during successive generations, often resulting in the development of new species. The mechanisms of evolution include natural selection acting on the genetic variation among individuals, mutation, migration, and genetic drift.
4. OR A total change of circumstances; a complete alteration in character, system, or conditions.

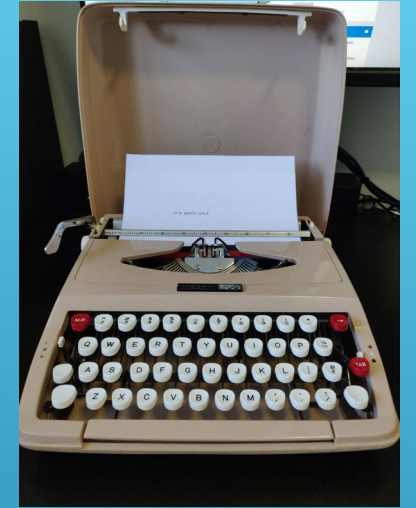
Source: Wordnik



A STORY OF A SMALL BOY BECOMING A PROFESSIONAL

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A BOY IN A SHIPPING COMPANY



A TEENAGER IN A SHIPPING COMPANY



I.T. IN SHIPPING A DECADE AGO

- Communications
 - Mini-M or Inmarsat B
 - The First FBBs & VSAT
 - Very Expensive and/or Low Bandwidth Services
- Software & Databases
 - Standalone Programs onboard
- Hardware & Networks
 - Standalone Computers which remain unpatched
- Operational Technology
 - I.T. Department was not Involved in operational technology

I.T. IN SHIPPING A DECADE AGO

- New Technologies
 - Applying new technologies onboard was slow and complicated
- Provide Solutions & Support
 - I.T. Department could not provide new solutions due to connectivity limitations
 - Support onboard was minimal due to connectivity limitations
- Data Integrity and Security
 - Due to connectivity limitations I.T. Dept., was not able to maintain the data onboard properly
- Crew Welfare
 - Crew Internet was not provided

I.T. IN SHIPPING HAS CHANGED A LOT

- Communications
 - INMARSAT provides New Technologies
 - The VSAT has developed also
 - High Bandwidth services which enable fast connectivity onboard
- Software & Database
 - ERPs Replicate with the Headquarters via data synchronization
 - Big Data coming from Vessels
- Hardware & Networks
 - Need for High Availability Systems on board
 - Computers connected in Networks and Patched regularly

I.T. IN SHIPPING HAS CHANGED A LOT

- Operational Technology
 - I.T. Department is Involved in operational technology and has a lot to consider
- New Technologies
 - Applying new technologies onboard is easier but challenging (Cyber Risks, Backups, etc.)
- Provide Solutions & Support
- I.T. is the solution provider for all Systems that need Network Connectivity
- Data Integrity and Security
 - Cyber Security Policies and Backups
- Crew Welfare
 - Crew Internet access is a must

CONCLUSIONS

- I.T. on board vessels has changed a lot the past decade.
- The change came along with Bandwidth change.
- Software, hardware and other vendors should adapt and cooperate with the I.T. department to provide seaworthy services onboard.
- The services' purpose comes from the Vessel's and Crew's needs.
- Question: What next?