Usability review of the New Metro Electronic Ticket

Tasos Makris

IT & Usability Consultant

Queues at the TVMs: were they necessary?



Basic TVM Usability problems:

- The time taken to issue a ticket is very long (65 sec)
- The management of banknotes fed into the TVM is difficult as it obeys a logic hidden from the user.
- The organization of the screen commands is not optimized
- The terminology used on the screen is not clear
- The TVM creates delays at every step.

Dimensions of Usability

5 E's

- Efficient
- Effective
- Error tolerant
- Easy to learn
- Engaging

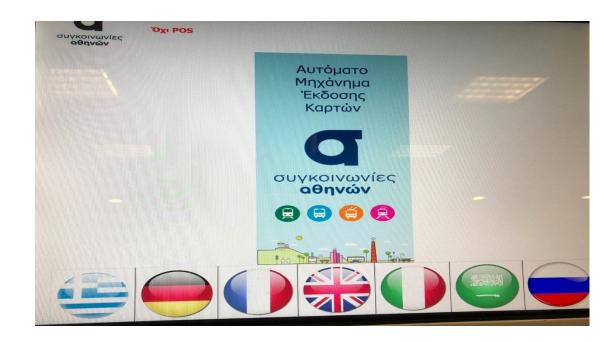


Objective:

To demonstrate which basic rules of Usability have been violated and what alternative solutions exist so that the issue of a Ticket will be SIMPLER & FASTER.

Step #1: Language selection

Is it necessary? Are they in the right order according to frequency?



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The use of voice commands demands an accurate **sync** with the written commands and with the machine's actions.

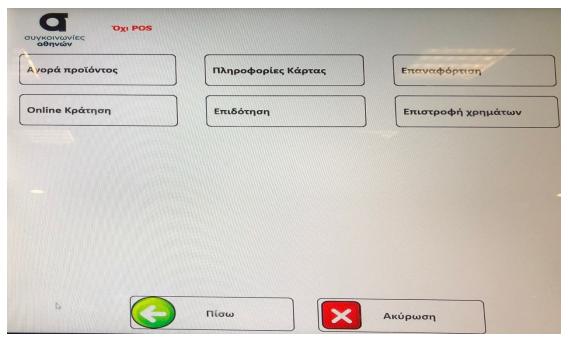
This is not always true.

Eg: the ticket is issued long before the voice command "pls pick up your ticket".

Step#2

What is a "product"? Do they mean the

"ticket";





■ The 1st choice is the least used !!



Step#4





■I believe that the best arrangement is:

90 λεπτών

24 ωρών

5 ημερών

2 Διαδρομές

5 Διαδρομές

10+1 Διαδρομές

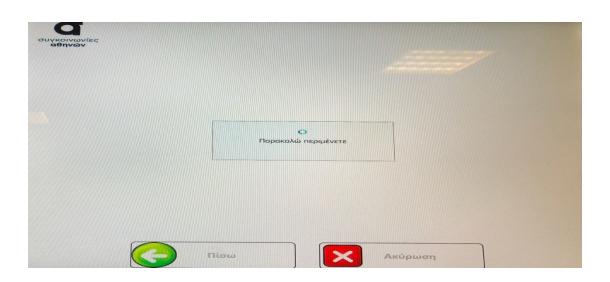
Or, the heavily promoted option "10+1 $\Delta_{I}\alpha\delta\rho o\mu \dot{\epsilon}\zeta$ " should be placed on top of all.



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Why WAIT?

 η μηχανή δεν κάνει κάτι δύσκολο για να ζητάει την υπομονή μας: υπολογίζει τα αποδεκτά χαρτονομίσματα και κέρματα.



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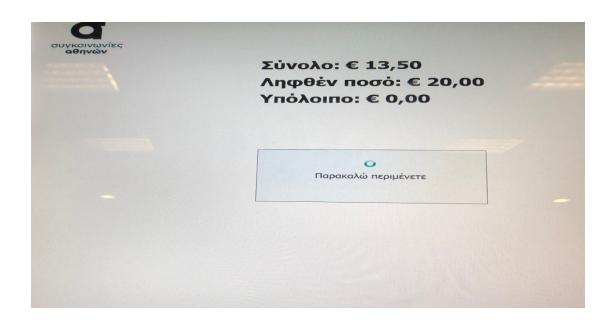


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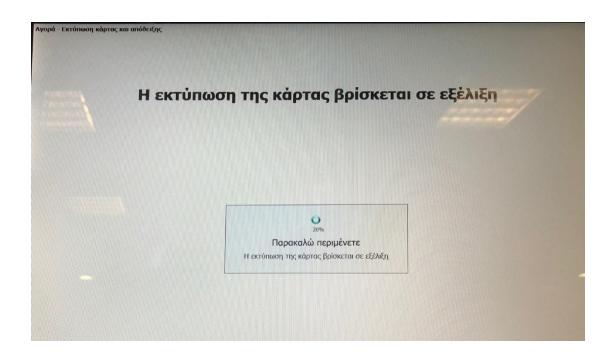
"Change" should be 6.50€, not 0,00€

This screen is displayed at the moment the voice command says: "the required amount has been received"



"the printing of your ticket is in progress"

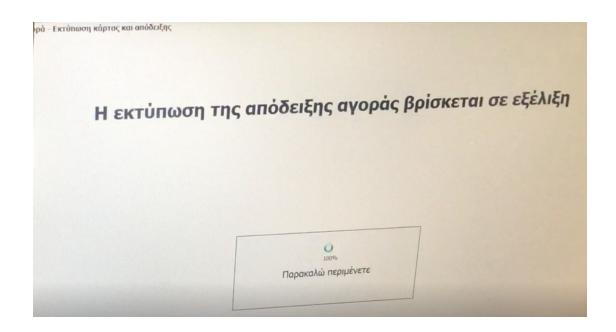
Voice: Pls wait for your change



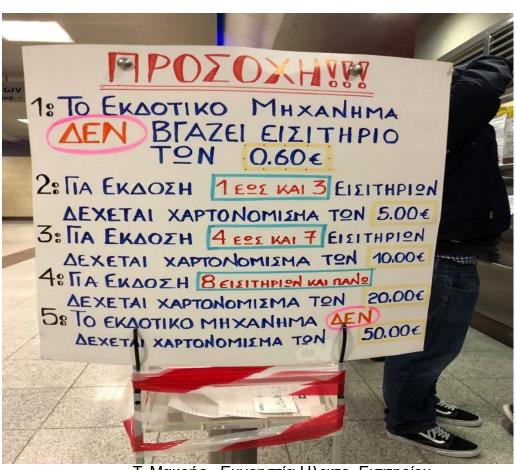
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"the printing of your receipt is in progress"

Delays....



Side effects



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Side effects



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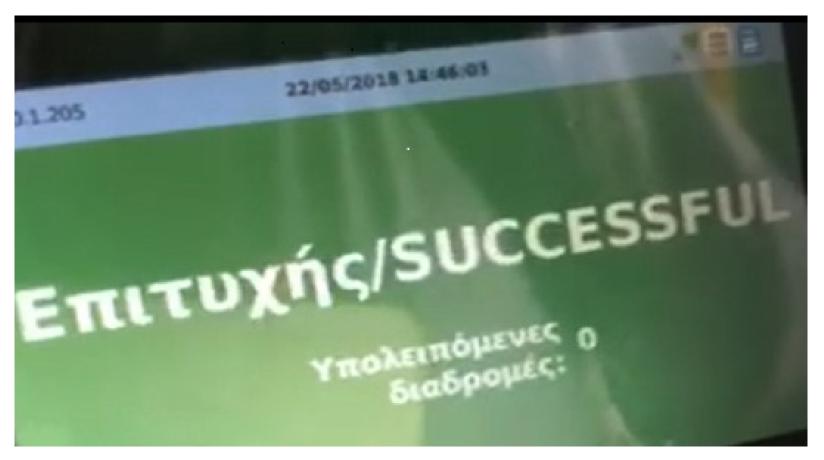


Given that the Ticket info stays on the screen for 2 secs only, it is important to highlight the following info:

- 1. Υπολειπόμενες διαδρομές (remaining journeys)
- 2.Υπολειπόμενος χρόνος (remaining time)



Cancelling the Ticket on a Bus#2



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A pessimistic outlook

The Athens Metro Ticket review, reinforces the pessimistic outlook about the quality of software developed by large organizations.

It seems that monopolizing a market, (ie lack of competition) is part of the problem.

The time lag between specifications and software delivery is the other part of the problem.

Usability Test

Ο έλεγχος της ευχρηστίας ενός προϊόντος είναι απλός: Το μόνο που χρειάζεται είναι να μπούμε για λίγο στη θέση αυτού που θα το χρησιμοποιήσει. Αυτό μπορεί να γίνει σαν διανοητική άσκηση, αλλά δεν είναι πάντα επιτυχής μέθοδος ούτε αποκαλύπτει ΌΛΑ τα προβλήματα.

Ο καλύτερος τρόπος είναι να στρατολογήσουμε πραγματικούς χρήστες για να υποβάλλουν το προϊόν σε διάφορες προκαθορισμένες δοκιμασίες και να καταγράψουμε τα προβλήματα που συναντούν.

Utopia?

Usability
aims
to reduce
Training & Manuals
to
ZERO!

UI is very important. UX measures it.

Instead of talking about "complex software", let's concentrate on "complex UI" instead.

"complex" is subjective. UX research will give us the "average" and "extremes".

 Software is being built by experts, but used by (usually) untrained people.

100

Bellis's Law

For years I have been testing the following idea:

Bellis's Law: For every computer problem, even many hardware problems, there is a simple solution to the user interface, often as simple as improved wording.

(http://www.usabilityinstitute.com/articles/moreTech.htm)

and it seems to me that it works!

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...a more realistic view:

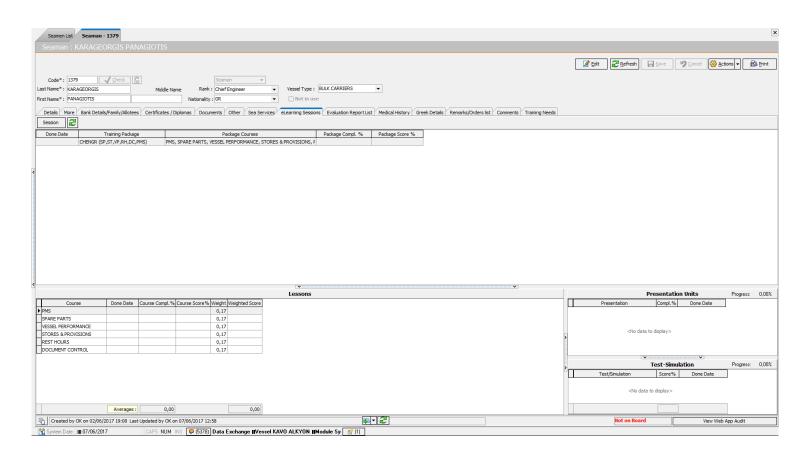
Minimum Usability:

- 1. Reduce Number of Clicks → Simplicity
- 2. Don't Make Me Think
- 3. Error Prevention (Murphy's Law: if something can go wrong, it will)
- 4. Error Recovery
- 5. Put Help text exactly where it is needed (ie: on the screen)

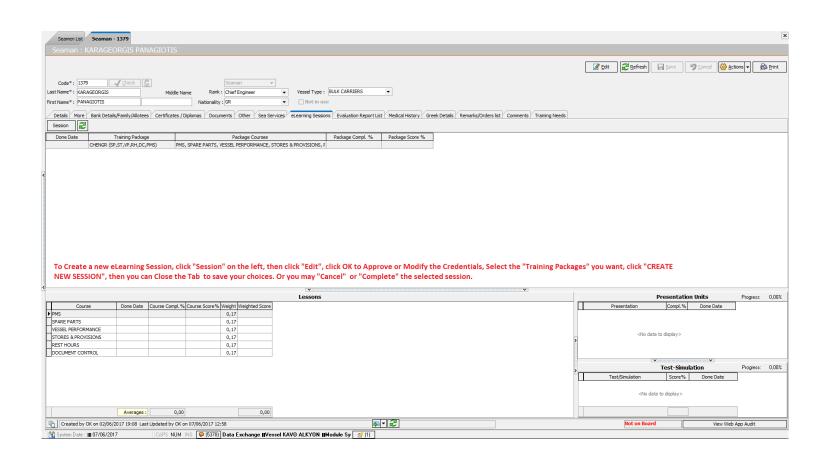
Example of Belli's Law

FBB Voice: 870773910
VSAT Voice: 870771300
VSAT Voice: 302112340
VSAT Voice: 302112340
VSAT Voice: 302112340

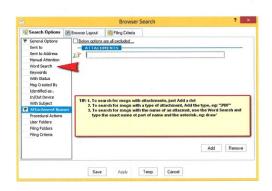
To complete a task, the User must perform a sequence of 6 actions. Difficult to memorize!!



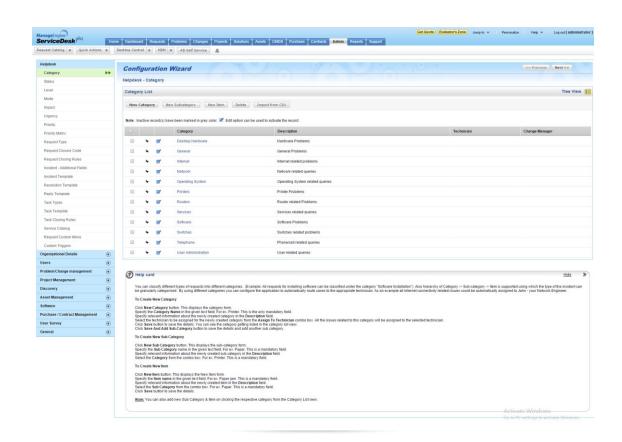
Put Help text exactly where it is needed



Put Help text exactly where it is needed

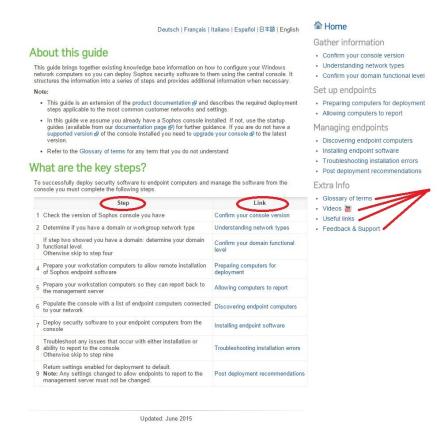


Put Help text exactly where it is needed



Striving for a perfect User Manual

Online, Multimedia, Searchable, Context Sensitive, User Editable



AMMITEC's Software Quality Guidelines

https://www.ammitec.org/images/AMMITEC_Maritime Software Quality Guidelines v1.pdf



Χρήσιμοι σύνδεσμοι:

- https://www.nngroup.com/articles/usability-101-introduction-to-usability/
- https://www.usability.gov/how-to-and-tools/methods/running-usability-tests.html
- http://www.uxbooth.com/articles/the-art-of-guerrilla-usability-testing/
- https://www.nngroup.com/videos/attention-leans-left-websites/
- https://www.nngroup.com/articles/test-when-you-know-answer/

Thank you!