How Old is too Old? Evaluating Personal Productivity Machines

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Abstract

Personal Productivity Workstations (PPWs) are crucial for business operations in today’s world. My poster will visit the question of whether organizations really need to spend large amounts of money to upgrade staff workstations, or if older “outdated” technology is still effective in meeting the staff’s computational needs. From gathering current PPW data at the Arctic Region Supercomputing Center (ARSC), I compiled the results and evaluated the effectiveness of the PPWs in use by current staff. Criteria included hardware capability and performance, staff satisfaction, cost to replace, manufacturer’s warranty, and commonly discussed hardware weak points (like laptop battery issues.) The results of this work indicated that “outdated” systems (by industry standards) can be effective beyond their perceived lifetimes. The data was also passed on to the ARSC administrative staff to be incorporated into the budget planning for the upcoming fiscal year.

Motivation

With the upcoming fiscal year, the following questions were asked by ARSC administrative staff: Answering these questions was the purpose of this project.

• Do companies need to replace aging systems?
• Is the upfront investment worth it?
• When should a place of business decide to update workers’ PPWs?

Problem

With the question of whether organizations really need to spend large amounts of money to upgrade staff workstations in mind, I used Internet research and initial thoughts to form the following assumptions:

• PPWs are important for business
• PPWs are constantly receiving advances in technology
• PPWs have a perceived lifespan of 3 years
• Companies only offer warranties for a maximum of three years
• PPWs are expensive

The data was collected via short interviews with staff. The interview gathered the data on the PPW and the staff member was asked about their satisfaction with the PPW. These results were compiled into a spreadsheet which was used to generate a variety of graphs and statistics useful for both this poster and the ARSC administrative staff.

Analysis

• The average age of the systems at ARSC is 4.8 years old
• Only 3 out of 15 (20%) staff members reported dissatisfaction—
  o Two of which were in regards to batteries
• Nine out of 15 (60%) processors are part of a product line that launched in 2006 and that hasn’t been in production since 2009
• The cost of a new PPW is $2000

Results

The results of the study suggested that in almost all cases the older PPWs in use at ARSC were meeting the computational needs of employees. These PPWs were exceeding the maximum manufacturer warranty and only 2 out of 15 (13.3%) were experiencing issues related to the common weak point of modern laptops, the battery. This data was passed on to ARSC administrative staff immediately to be used in the annual department technology refresh for PPWs. The data also shows that purchasing for the future requires the best return on investment, because PPWs have the realistic potential to outlast the perceived lifespan of 3 years.

References

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