Technical Panel
of the
Nebraska Information Technology Commission

Hardware Architecture
Minimum Workstation Configuration Guidelines

COMMENTS RECEIVED

COMMENT #1 Larry Shaw, SCC

Comments the draft document titled "Minimum Workstation Configuration Guidelines:

Reference section C3:a(1)

Would recommend that new purchases be 1GHZ minimum with 20GB drives.

Reference section C3:a(5)

Windows 2000 or Windows NT 4.0 will not be available to purchase after about Nov. 1.; at least that is what they tell us. If that is true then your comment about Windows XP needing 256mb of memory should change the memory requirement for minimum configuration.

Reference section 4(1)

We are not able to purchase MS Office 2000 at this time, XP Office is only suite available.

Only suggestions. Thanks

TECHNICAL PANEL RESPONSE:

COMMENT #2 Roger W. Adkins, Media/Technology Director, ESU 16

A comment on the workstation configurations listed on the NITC website:
In reading the suggested configurations, everything seems to be related to a Windows environment. Roughly 60% of the K-12 member schools in our Service Unit area are operating in a Macintosh environment. I believe the numbers are close to that percentage on a state level as well in the K-12 realm. Just wondered if this might cause some problems.

TECHNICAL PANEL RESPONSE:

COMMENT #3 Jim Hopkins, ESU 1

Why have you limited the hardware requirements to equipment required for Microsoft networking? Why does it have to be intel based or windows based? We won't be following this if it becomes a requirement. We have invested

heavily in Macintosh and could not afford a change of this magnitude to satisfy the prejudices of this "list." Or is it that when you say "or equivalent", you mean other operating systems. Not only have you left out Macintosh systems, you haven't provided for linux or unix systems. Would they not be "approved" when brought before the NITC in a proposal? Please consider these when formulating the next draft of Minimum Workstation Configuration Guidelines.

I welcome any dialogue on this subject. Thank you.

TECHNICAL PANEL RESPONSE:

COMMENT #4 Chris Petroff, ESU 9

The current proposed standard seems to slanted to only one solution and one OS manufacture. Many state entities and schools have other platforms such as Macintosh, and adding the proposed standard would only ADD to the support, training and cost issues.

And consider the following:

Paragraph B ...Minimum configurations are established in order to simplify technical support and enable a secure desktop environment.

If this did in fact meet the intent of the proposal, that would be one thing, but after the latest round of virus attacks it is apparent that the Microsoft line of products only ADD to the amount of technical support required. Just ask any Windows office how much time was spent cleaning up after the NIMDA attack. And the time and cost estimates do not include the lost time of productivity by the staff, nor the huge negative effect the spewing of email and port scanning had on the internet infrastructure of the state from the infected Windows computers. It created *denial of service* situations for many ISP's due to the load. Then ask any Macintosh environment how much time was required; answer NONE.

In looking at the past few years of virus and worm attacks, it is obvious the Microsoft platform is the primary target, and it makes no sense to force other state/grant funded entities into technology that will only create a greater financial and staffing burden. Funds are limited, the choice should be made by the buying entity. The K12 schools are in many cases supporting their curriculum with Macintosh computers and servers. K12 schools can not afford the business model of having qualified Windows technical personal on staff, nor can they afford to pay the going business rate for such support. K12 schools MUST be allowed a choice, and have the support of the state to ensure grant funding. Educational Service Units as partners with the K12 schools must be granted the same.

Changing a few key words in the below would help ensure other acceptable options are available.

"3. Minimum New Personal Computer Purchasing Guidelines:
When purchasing new personal computers, an agency should consider the following minimum guidelines.
a. Standard Desktop Hardware
(1) CPU: 500 MHz ** STRIKE Intel ** or equivalent CPU or higher
(2) Memory: 128 MB RAM or higher

(3) Disk: 6 GB or larger
(4) LAN Connection: (either depending on agency LAN configuration):
(a) Ethernet: 10/100 Mb
(b) 4/16 Mb Token Ring (YOU'VE GOT TO BE KIDDING)
(5) Operating System:
(a) Windows 2000 (recommended) or
(b) Windows NT 4.0 Service Pack 6a, (with 128 MB RAM and 128 bit encryption),
(c) Windows XP (requires 256 MB RAM) or
ADD (d) Macintosh OS 9 or OS X
b. GIS Workstation Desktop Hardware

c. Should strike Intel reference and add Macintosh OS X server software.

Thank you for consideration of these comments.

TECHNICAL PANEL RESPONSE:

COMMENT #5	Chuck Friesen, Director, Instructional Technology, Lincoln Public Schools

NITC recently issued draft Minimum Workstation Configuration Guidelines <http://www.nitc.state.ne.us/standards/index.html> which are presently open for public comment. My response to the document follows.

If the document were written to only apply to State Agencies, then I think the document is well written and could meet their needs. However, the document in its present form does not serve K-12 education needs.

NITC has in the past been a "filter" or "gatekeeper" of technology as it relates to K-12 education technology purchases. The best example of that is the "technical review" NITC has provided for the technology-related Lottery grant proposals. What role NITC will play in monitoring or evaluating K-12 technology applications, purchases or grants in the future we can only guess at today. For these reasons it is critical that the document be written so that the guidelines have the collective support of K-12 educators.

If NITC has Minimum Workstation Configuration Guidelines, then I assume those guidelines will be used as guidelines in all such reviews or in any state-related program which distributes federal flow-through dollars for technology in K-12 schools. That has tremendous implications for how a grant proposal will be viewed by reviewers, like the NITC technical reviewers. Thus, this is a very serious matter and we should give considerable thought to these guidelines.

The document includes:
"These guidelines provide a suggested set of minimum configurations that agencies can adopt or modify to meet their specific needs. These guidelines are not intended to endorse or support any single hardware or software vendor. These guidelines are subject to periodic review and revision."

I suggest we modify the document now so that the guidelines do NOT endorse or support any single hardware or software vendor. Let's do all the modifying now, so that we do not find ourselves backed into a corner two

years from now. (Of course the document will have to be reviewed periodically.) I don't want to be involved in any debates in the future over what can be modified and what can't be modified or whether a Sun server can bought or not bought. Let's decide right now what can be modified and what can't.

Several observations:

1. I have never really understood the role of NITC as it relates to K-12 education. Does that role differ from the role NITC plays with respect to State Agencies?? Universities? Other groups? Are the proposed guidelines State Agency guidelines? or NITC guidelines for State Agencies? Or NITC guidelines for K-12 Education, State Agencies, and Universities? Or NITC guidelines for Govt, Communities, and Education? (I can't imagine University buy-in on these guidelines because for them it is assumed that Linux, Solaris, Unix, Sun, Macintosh, etc. are everyday occurences and don't need to even be discussed or debated, regardless of what NITC says. And yet they are all missing from these guidelines. Am I wrong? Unless there is evidence in the document that these kinds of platforms, software, etc. are acceptable purchases, I will have a hard time supporting the document.)

2. I don't think technology in K-12 education is clearly understood by the drafters of these guidelines (Just like I would be first to admit I don't clearly understand most of the technology issues facing State Agencies or Universities). I would volunteer to coordinate presentations (with the help of others) for the NITC technical review committee, NITC Education council, and any other NITC related groups that could benefit from having a clear and current picture of K-12 computing practices and issues - past, present, and future. It is only when one begins to understand these issues that one can truly make decisions that that are in the best interests of K-12 education. The existing guidelines do not represent guidelines that K-12 educations can subscribe to. This is not being critical of the present document. But let's be honest - that document is written from a STATE AGENCY viewpoint. But NITC is much more than that, isn't it? Or is NITC really a "state agency organization" and a little bit more (what's a little bit more?? that gets fuzzy and makes me quite nervous!!)

3. I fully support NITC adopting guidelines similar to what they have published:

"As minimum configurations, these guidelines are recommendations to be considered in conjunction with other factors, including financial constraints, performance requirements of specific applications, and an agency’s networking environment.
The primary objective of these guidelines include recommendations to:
A. Improve versatility and compatibility of desktop systems;
B. Insure that personal computer configurations procured with state funds can operate efficiently in today’s high speed connected environment;
C. Provide a guide to an agency on when to upgrade existing personal computers;
D. Reduce technical support problems; and,
E. Provide a secure desktop operating system."

Then if STATE AGENCIES wish to further develop guidelines and publish documents similar to the proposed guidelines FOR THEIR CONSTITUENCIES, that seems quite reasonable. Or do the State Agencies want NITC to publish

these guidelines? (It seems like the state agency people wrote the NITC guidelines so that NITC could tell the state agencies what to implement, or am I missing something?)

And if K-12 education wishes to publish a similar list, that would be acceptable to me as well. However, I doubt that there is one set of guidelines that any one group would propose that will be acceptable to all groups. But yet each set of guidelines could a) improve versatility and compatibility of desktop systems; b) insure cpus operated efficiently; c) reduce technical support problems; and d) provide a secure desktop operation system.

Isn't that really what we want to occur? Isn't that our ultimate goal? Our goal isn't Win or Mac or whatever, is it? Our goal is versatility, compatibility, efficiencies, reduction of support issues, and secure desktops and so on. And that varies significantly from one environment (state agencies, K-12 education, higher education, etc.) to another.

Let's not impose one group's "implementation guidelines" on other groups. But rather let's agree on the general guidelines, recognizing that there are different ways to provide excellent computing environments. If that means there are State agency guidelines, K-12 education guidelines, University guidelines, and others, then so be it. But let's be honest about exactly what the NITC guidelines really will influence and what they won't influence. I am very curious about these guidelines as they apply to HIGHER EDUCATION. My guess is higher education will have very little buy-in on these guidelines. Or more likely, they will just ignore them. I would like to hear what the 8 NITC higher education reps have to say about their institutional responses to these guidelines. Are they operating under the assumption that the only purchases they can make have to meet the guidelines? Or are they indifferent to the guidelines because they believe the guidelines only apply to state agencies? Or that they will do whatever they want to do? This is a critical time to answer these and other questions. I don't ever want K-12 education held to these guidelines if we don't expect higher education to be held to them.

"Situation #1".
An elementary school has 50 Macintosh computers. All are networkable, all have fast access to the Internet, all can access all State web pages, all can access building and school district resources stored on servers, etc. Staff members have received extensive training on goals and objectives that work toward effective implementation of technology in their school for student use and teacher productivity.

The school wishes to purchase 5 additional computers. This school wishes to buy Macintosh computers because of their substantial investment in support and training for their school's technology program. They claim all their computing needs would be met by purchasing Macintosh computers since their training and support issues would be less than if they were required to adopt another operating system (Windows, for instance).

The NITC guidelines do not support such a purchase. That is a problem. Any guidelines that cast a shadow of whether or not this senario is "acceptable" will not work. Rather, the guidelines need to clearly indicate that such a purchase is acceptable, just as the guidelines clearly indicate which versions of Windows are acceptable. That way there will not be an misinterpretation at some later time. We may as well address this

right up front and clearly indicate that it is acceptable to purchase Macintosh computers (or Unix or Solaris or ???).

What this really comes down to in my mind is that DAS and Div. of Comm. want guidelines for their constituencies (is K-12 education included in that group???). And NITC needs guidelines, I guess. I understand that. But NITC guidelines have to be much broader because NITC (at least it seems that way) oversees groups other than state agencies. The document as it stands might work for State Agencies. But it doesn't work for K-12 education.

"Situation #2"
(Thanks to my colleague, Kirk Langer, for these examples.)

A school district provides communication services using a server running the Solaris operating system (Sun). The communication services include email with access via standard protocols (POP, IMAP, HTTP) and calendaring with access via standard protocols (XML/HTML via HTTP). Support personnel have received specialized training in the support, development and maintenance of these products running in this environment.. If the district decided they wanted to start providing communication services to students with the same products and applied for grant monies distributed by the state such a purchase would not be allowed. Instead, we would be relegated to an Intel solution which would be inconsistent with our current solution, in all likelihood would be inferior in stability and performance, and would not utilize the considerable skills we already have. If you're looking for inefficiency you needn't look any further.

Another example. Our district decides to get a handle on the sprawl of its web site by instituting a web content management solution. The chosen solution (Roxen or ePrise) runs under Solaris, provides access via open standards (http) and builds atop existing skills. Further, custom database applications are desired and would be built using the WebObjects application server with Oracle as the back end database and the iPlanet Enterprise Web server. Despite the fact that this solution utilizes best of class server hardware, application server and web server the current document would seem to disqualify it from consideration if state money were to be used for the purchase.

Finally, a school for Special Education students has very specific requirements
for their computing environment that can be met with a thin-client solution featuring Sun servers and workstations. The cost of the hardware is less than a comparable PC solution. The advantages in support, maintenance, and security associated with a thin-client solution for such an environment are substantial. Based on the current document such a purchase would not be permitted if state funds were used.

This is a very important issue. I'm sure I don't understand everything about the proposed guidelines and I am ready to stand corrected where appropriate. However, the guidelines need to be debated openly and honestly. Let the dialogue begin.

TECHNICAL PANEL RESPONSE:

COMMENT #6 Jim Hopkins,Technology Coordinator, ESU #1

I am a part of a committee working on Guidelines that would parallel that which you are doing right now for the NITC except our guidelines will be primarily for K-12 Education. We would really appreciate more time in putting together our thoughts concerning the needs and resources for K-12 Education. We would therefore appreciate an extension of the time table for our concerted effort to draw up minimum workstation configuration guidelines.

Please let me know if an extension to the October 15th deadline is possible.

TECHNICAL PANEL RESPONSE:

COMMENT #7 Kristi Peters, Telecommunications Coordinator, ESU #7

The Nebraska ESU Network Operations Committee has reviewed the draft guidelines and will be submitting a set more applicable to K-12 schools and Educational Service Units within 60-90 days.

TECHNICAL PANEL RESPONSE: