From johnbail Tue Jan 14 17:38:05 1992
To: brunoa chrisg chrisp edwardj jimall peterg royl stevem tandyt
Subject: Visit to Inference, a competitive advantage for Win4 over Mac?
Cc: billg darrylr davest glenha karenh lesterw markbo mikehall mikemap
    nathanm robg
Date: Tue Jan 14 17:36:14 1992
Status: RO

DarrylR: Your point on using macros is well taken, but begs the question.
        If sufficient macros could be written to anticipate all user needs,
        then why have Windows at all? Also, at what limit does one stop
        writing macros? And what mechanism does the user have to direct
        her to the macro she needs? Another macro?

EdwardJ: Please keep PSS appraised (I'm sure you will) of proposals with
        Inference. The PSS Technology White Paper, written under GlenHa's
        sponsorship, proposes that PSS acquire their technology through
        a corporatewide strategic partnership. Proposals before MarkBo
        and DaveSt for use of the product in our on-line systems are
        being drawn with the proviso of folding that expense back into
        such an agreement should other divisions find this technology
        of interest.

John

    From edwardj Mon Jan 13 23:17:05 1992
    To: brunoa chrisg chrisp jimall peterg royl stevem tandyt
    Cc: billg darrylr johnbail karenh lesterw mikehall mikemap nathanm robg
    Subject: Visit to Inference, a competitive advantage for Win4 over
    Mac?
    Date: Mon Jan 13 23:16:16 PDT 1992

    I visited Inference on Friday at the El Segundo headquarters. This
    was after numerous phone calls and a visit they made up here.

    Inference is a leading vendor of AI applications. They have among
    the most practical approaches, and were selected by PSS as the
    vendor of choice for information-management and access software.
    Inference is the leading supplier of a "hybrid-paradigm" architecture
    that uses an object-oriented model with procedural, rule-based,
    and case-based programming. The system is flexible and performs
    well in numerous network information-intensive applications at
    American Airlines, American Express, and other places including
    integration with legacy data.

    I became interested in applying Inference technology after seeing
    that they have a relatively lightweight Windows implementation that
    I think would integrate well with the Windows 4 query and object system.
    There may also be interesting applications to apps. My Win4 goals are
    manifold:

      1. Assist the user in task focus — allow the user to use
         "smarter" Wizards to manage the exploding number of
         software components. Without this kind of "component
         managment", I fear the system will get too complex for
         the end-user. Apple's person looking at component mgmt,
         John Sullivan, to my knowledge isn't looking in this
         area and is having alot of trouble. On Newton, Mikel
         Evins is. But I'm willing to bet that it would be a
         very cool and NEW (industry wide) OS feature to make the
         system more usable across application components, and open
         a new market for wizards using other components (e.g 1040
         tax form using Excel, MacroMan, etc.). This SHOULD DEFINITELY
         BE USED (or something like it) for workflow, where rule-based
         systems (and their consistency constraint engine) are
         definite usability pluses.

      2. Make smarter help. The current help systems are more
         hypertext references — they are "reference books" more
         than "help" systems. Inferences major design wins with
         Case-Based Reasoning has been in helpdesks (like PSS).
         Coupled with a good help delegation architecture (e.g.
         look local, then to a corporate help desk, then to a
         vendor helpdesk), we could have the most helpful system
         in existence (score another point on the Mac usability).

      3. More interactivity with the system. This includes an
         admin asking things about the system. Inference has

installed such a system for Compaq (this was disclosed
under NDA) which will be rolled out by mid-year. Users
or admins can ask how to improve their system performance
and questions like that based on auditing information and
shared cases.

4. Leverage their query technology to make queries easier
   to use. They have a simple natural language query front
   end which seemed very reasonable — not too fancy, but
   gets the job done. Their queries are very fast, and
   although the visuals and some UI are not so great (really
   optimized for helpdesk applications), the UI from the
   standpoint of ease of use (e.g. boolean queries, refinement,
   etc.) is alot better than what I've seen of Win4.

In short, I think their technology can get the job done. JohnBail
has reports from PSS that go into further detail about their reasons
for selecting Inference for their application.

All is not roses, however. Inference's underlying store is closed. But
their next release (beta 2Q92) will allow open stores. The only thing
that becomes inefficient is dynamic feedback of rules, which I
think is rare anyhow. I have discussed this with Inference and they
and I think it's possible to overcome quite easily (e.g. weeks of
work, not months or years).

Inference showed me a demo they whipped up between my phone call
on Tuesday and the meeting on Friday morning. It did not crash
when I played with it — it was written in their environment and
used their lightweight Searchlight Windows engine. Basically they
entered text descriptions of various components of Win3, such as
the applets, Word, Excel, etc., and a few VB macros that would
drive the other apps using DDE. Altogether there were about 35
components. Then they sat me in front of the UI, where I typed
things like "I want to write a report". I would get a hit list
below (ordered by relevancy), and a set of questions that would
decrease the hit list, for example, "Do you want the report to
be in Word format?", and "Will you have charts?", and "Is this
an annual report?". Then you could launch the hit and get your
work done without knowing about the components used. It was
pretty neat. With commands, this could be the basis of a very
cool task-focused help and Wizards technology.

I don't want to make this too long, but they also have a neat
debugging environment, and the user can play alot of what ifs,
and optimization games with the system. It supports monitors/
triggers. They showed an alpha version of a system to process legacy
data into categories using neural and genetic algorithms. Again, they
weren't trying to do super-fancy things, but had good performance on
a number of standard AI benchmarks. This is learning modeling.

I think there are a number of interesting business arrangements
we could look at with Inference for Win4 (I don't know how interested
apps is in this — I know that Word would like to do smarter wizards)
that range from full integration into our query system down to just
having them supply an applet called "component/task manager" to make
workspaces smarter (or whatever our task-orientation thing will be).
They seem to be reasonably flexible (they are half consulting business
already).

This is one way we can push ahead in user friendliness, esp. in the
harsher, more complex world of many components. I think that the Inference
technology can get us a long way in the right direction. I'd like to
get this going for Win4 by putting together a low-dependency plan
for Inference work.

Edward