

TOMORROW'S BIG IRON MANAGEMENT TEAM MEMBERS - WHERE WILL THEY COME FROM?

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An area revisited....

- Addressed twice, in CMG sessions
- Always raised some interesting conversation
- Time to bring the issue up again....
- Some revisions...
- Disclaimer – personal views, not those of my employer ..

Chapter 1

- Where we are today
- The state of the world of the mainframe capacity/performance analyst
- The dilemma stated

So what's my point?

- We're in a crisis point in the history of mainframe computing
 - Many mainframe specialists are approaching retirement or pursuing other interests
 - There's no major arrival of new people to replace the retirees / those who go elsewhere
 - There are minimal in-house resources with which to develop or nurture new mainframe capacity planners, performance specialists, and systems programmers

How could this have happened?

- Crank the clock back to 1989-1992
 - New platforms emerged and/or matured
 - DEC
 - UNIX
 - Windows
 - MS-DOS
 - s/36-s/38-AS/400
- MBM = “Management by Magazine”
- <squawk> “The Mainframe is dead.” <squawk>



New people entered the systems programming/administration world

- OTHER non-mainframe PLATFORMS
 - More glamorous
 - Easier to learn
 - More opportunities to learn
 - Systems programming not necessarily a priority
 - Capacity management DEFINITELY wasn't...

Other cultural effects

- We played into it
 - New challenges before us, new platforms to learn
 - ***“Carpe Diem” – Dr. Bernie Domanski, CMG 1992***
 - Opportunities for “Empire Building”
 - ***“Think about it, your OWN decentralized IS/IT group – with you as the boss.”***
- Paradigm shift
 - Career development became a one-sided affair
 - Cuts to training and employee educational resources
 - Free agency

Paradigm Shift continued on ...

- “Free Agency” vs “Farm System”
 - Talent costs are higher **
 - Success % justifies higher salaries
 - Lower overall costs
 - Fewer failures
- Also – if you develop and nurture talent, competitive market situation to RETAIN that talent – often perceived as “no win” by management
- Develop/retain, or release and recruit?

Resource acquisition strategies changed

- Things got simpler, technically
 - WLM & Capacity on Demand
 - Old = Pit one vendor against another
 - *Do your due diligence and capacity planning*
 - *Right-size*
 - *Get it right, or else*
 - New = Plan Ahead
 - *Cost determination / justification*
 - *Not enough? Just buy more*
 - *Non-intrusive upgrades*

End result

- Fewer people that know the platform, but that was okay
 - MVS and OS/390 and z/OS
 - Fewer systems => Fewer people needed
 - Mergers and acquisitions
 - People were expected to work harder (or “smarter, not harder”)
 - If the talent is needed, it’s out there. SOMEWHERE.
- **STILL CRITICAL**
 - z/OS – z/VM personnel must know concepts and facilities
 - **BUSINESS** concepts ...
 - Not just **TOOLS** to measure and control them!!!!

Other happenings

- Educational systems (Universities)
 - Reduced their mainframe commitments
 - Other, more alluring platforms (UNIX, Windows)
 - Internet wasn't serviced by mainframes at first

*“We have met the enemy, and he is us” – Pogo
(Walt Kelly)*

A funny thing happened on the way to the 21st century

- The mainframe didn't die
- The mainframe retained its prominence in the world
- It was discovered -- actually, impressed upon people
 - Mainframe is cheaper for large scale processing
 - It's often easier to maintain
 - It's scalable
 - Virtualization is practical

... on the way to the 21st Century

- “TCO” for the mainframe dropped
- One study – “The Dinosaur Myth”, Xephon, 1992
 - Some processing can’t be converted to non-M/F platforms
 - Cost-effectiveness stronger
- Reinforced in 2002 and 2005 by the Arcati Institute
 - Per annum cost per user cited at \$4500 on mainframe, \$5400 for UNIX, and \$8000 for Windows users.
 - Can’t truly assess a real cost per user in 2013... but....

Interesting updates ...

- Statistics and more statistics.....interesting reading...
- Last quarter, IBM – 10% growth in mainframe business
- (<http://www.v3.co.uk/v3-uk/news/2283288/>)
- Arcati Institute 2013 Yearbook (*before BC12 / z114!*)
- (<http://www.arcati.com/newyearbook13.pdf>)
- A few stats(verbalized)

The dilemma – in a few years' time

- Mainframe will be around – and bigger
- Shortage of mainframe personnel *** *disclaimer, yeah but.*
- Shortage of those who have the skills and knowledge of CPE ** *another, yeah, but*
- Baby Boomers
 - 1947 = now 66 * SSI age in U.S.A.
 - 1951 = now 62
 - 1958 = now 55 * early retirement in many places

Conclusion - likely still true...



The mainframe never went away; if you truly think it did, it's been back for awhile, it's here, and it's often more cost effective than MIS services on other platforms.



Chapter 2

- A look back at ourselves and our own careers
- What's changed?
- Can we apply our experience to bring in our successors?
- What else can we do?

How did we start?

- Usually – we latched on to a company
- We worked – and they kept us educated
- Entry-level roles – operations and ops support, programming, internship or part-time work
- Opportunities to learn – always there
- Mentoring was common
- Junior people learned from senior people with practical experience (* *an offshoring issue, observed*)

How did we grow?

- Usually home-grown but allowed educational opportunities
- We often jumped ship for better opportunities, not necessarily more money
- Experience ***
- We were allowed to make mistakes (*occasionally*)
- *Smooth roads and rocky roads* – we found our best environments for growth

What's missing today ????

- Lack of training opportunities
- Little patience for bringing newer people up to speed
- Concept of mentoring is oft-missing, probably disappeared from the culture
- No exposure to the mainframe platform at university or internship levels
- “Career path concept” can be limiting

Changes we can work toward or push for

- Developing in-house talent
 - Time
 - Money
 - Patience
 - Change of culture
- Education and Training
 - Internships
 - Work with local universities / community colleges
 - Internal training programs
 - Talk with vendors

IBM Academic Initiative z/Series Program

- Use a search engine to find more information (formally called “z program”)
- Seeks cooperation with and provides assistance and materials to university faculty
- Encourages development of mainframe expertise
- Certifications, examinations, and even potential job matches

IBM Academic Initiative (directly from the website)



- For universities:
 - Stronger relationship with businesses
 - Access to industry technology experts
 - Faculty training on latest mainframe facilities
 - Comprehensive curriculum to meet market needs
- For Business Partners:
 - Access to qualified mainframe talent
 - Strengthened collaboration with academia
 - Development of targeted work-study programs



Examine Vendor training and user groups

- Some of it may be available at no cost
- Some may require tuition
- Depending on your arrangements and contracts, you may have unused education credits with vendors
- CMG , SHARE
- One hour per week open topic sessions (“brown bag”)

Chapter 3

- Convincing the younger colleagues to take up our cause
- Talking points
- What needs to be done

Convincing the unconvinced, the protege

- Their viewpoint
 - This isn't glamorous
 - It's often "Green Screen" carried over to modern times
 - Too much risk – massive single point of failure
 - Complete unfamiliarity with the technology
 - (unstated) too complicated
- Computer performance and capacity planning
 - Too compartmentalized, fear of falling behind curve
 - Not enough hands-on work
 - Projects that never end

Eight Talking Points – try them out

- Irrefutable platform durability
 - Changes, but 50+ years of survival
 - It's not going away
 - It's commercially viable
 - Large enterprises tend to not go away
- Longevity in employment
 - Many mainframers survived in the field
 - Retirements spur opportunities
 - Architecture changes, but not suddenly / “Future Shock”

Eight talking points – points 3 and 4

- Long running professional groups
 - SHARE, CMG
 - Fostering advancement of the state of the art
 - Professional exchanges and networking
 - Advance your OWN status
 - Education at low cost
- Changes and improvements
 - Stagnation avoided, architecture, subsystem changes
 - Business changes => Capacity and performance work

Fifth and Sixth Talking Points

- Newer technologies melding into z/OS world
 - Virtualization under z/VM
 - WebSphere
 - Future developments will occur on existing platforms, but will there ever be new platforms?
- Chance to apply familiar skills, transport expertise
 - Database design
 - TCP/IP network topology
 - 4th GLs (SAS) very similar to SQL
 - ***Integration with other platforms***

Final talking points

- Analytical capability is required
 - Not just a technician, but an analyst and communicator
 - Learn the BUSINESS as well as the technical side
 - Contract analysis – license charges, understanding
 - Upper management / executive exposure
- Different pressures, not as intense
 - Reporting systems, post-process analysis
 - Work at a set pace, very few midnight calls
 - Capacity planners – 9 to 5 (generally – well,)

One more for good measure

Because the capacity planning task is essentially a critical internal business function, many enterprises choose not to outsource it, and it's an extremely difficult process to send outside of the data center.

- You can hire outsiders to produce a capacity plan - but insiders must have input to it...

Chapter 4

- Selling upper management
- The starting time is ~~NOW~~ was years ago
- Conclusion

Convincing upper management that this is the right thing to do



- Employee retention
- Things take time *** z/OS is not a plug-and-play operating system
- Financial incentives
- Long-term continuity & functional assurance



When to start?

- TODAY
- Mentoring, and bringing newer staff along
 - A new “old concept”
 - Can make final working years more pleasant
 - Benefits all in the enterprise

Technical challenges for the new mainframer

- Understanding of Variable License Charges, Capacity on Demand – technical ability => management
- Standard utilities
- Mainframe architecture
- Computer performance evaluation concepts
- SMP/E
- Network activity analysis
- RMF, SMF, online monitors, and tools to process them
- Real-time monitoring
- Word Processing, presentation software

Business challenges for the new mainframer

- Capacity on Demand
 - Business requirements - Technical requirements
 - Costing – Risk avoidance – Risk acceptance
- Time Shifting of work
 - Feasibility -
 - Practicality

Continuous analysis

Negotiation skills....

Conclusion

- Just food for thought!
- Many thanks!