CUMREC '96

THE LEVERAGED SUPPORT MODEL

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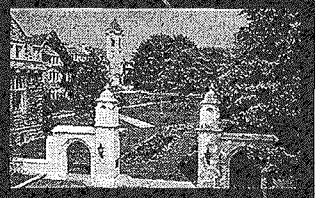

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Grateful Acknowledgment:

- Sue B. Workman
- Gary Alspaugh
- Dennis Gillespie
- Duane Schau
- Rick Jackson
- Steven Dow
- Jining Han
- Yuqing Chen
- Todd Walker
- George Schmidt
- Dawn Hewitt
- Susan Jones
- Norma Holland
- Chris Peebles
- Marion Kretfeldt
- Bonnie Hites
- Tom Wetzel
- Ali Shashaani
- Heather Chaykowski
- Dan Fitzsimmons
- Matthew Duda
- Tony Walker
- Mark Lynch
- Melody Childs
- Toby Sitko
- Max Lauchli
- Polley McClure
- The entire staff of UCS frontline services
- 150 local support providers in IU departments

In the beginning .....

- *Computing was centralized*
- Networks were simple
- End-users had 'dumb' terminals

Support was easily accomplished from a centralized point

- All applications were on central resources
- *Problems were "easily" determined & resolved*
- Support resources were small (10% of the org)

& the living was easy .....

Then .....

- IBM invented the PC
- Along came Apple
- TCP/IP
- Novell & LANs

Then .....

- Applications ran on PCs
- Users wanted to interact

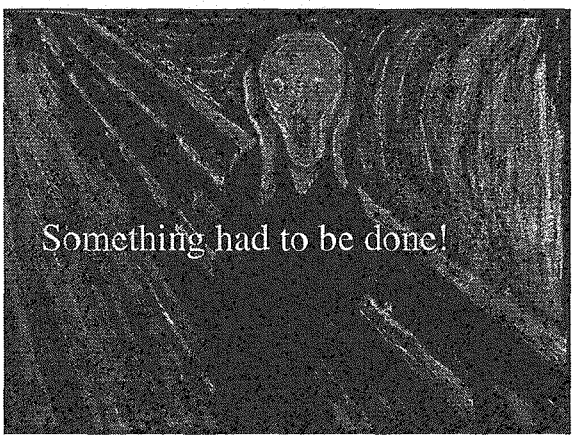
Still .....

- Centralized computing existed .... and grew!

..... & grew!

The breakdown of centralized support

- Support resources grew & grew to 25% of the Central Computing Organization --- CCO
- User demand outraced even this growth & users wanted to do more locally
- The CCO began to ration support
  - --Supported Software Lists
  - --Supported Equipment Lists
  - --Limited Visits with Users
- & users grew dissatisfied with CCO's support



1989-90
The Beginning of Distributed Support

- Instead of creating more of "us" .....
- Why not create some of "them" ..... to provide support in the departments?

A new way....
Distributed Support Program

- Goals:
  - -- Increase quantity of support resource
  - -- Move it closer to users
- Methods:
  - -- Seed support in departments
  - -- Train support staff that grew "wild"
  - -- Create a network of computing support staff

Seeding support in departments....
Distributed Support Assistants (DSA) Program

- CCO hires DSAs & places in departments
- CCO trains DSAs like "one of our own"
- CCO trains supervisors of DSAs
- The Partnership .....
  - -- Year 1: CCO picks up entire $s
  - -- Year 2: CCO & department equally share $s
  - -- Year 3 & beyond: department picks up entire $s

Seeding support in departments
Distributed Support Assistants (DSA) Program

- Cost$
  - -- $350,000 over 5 years
  - -- 1 FTE per year of CCO staff
- Results
  - -- 26 positions created
  - -- 75 departments gained support
  - -- 100% success (all DSAs retained)
  - -- Increased support resources (26 became 70)
  - -- Small departments formed support consortiums
- Tangential results
  - -- Support developed even in non-participating units

Training support that grew "wild"
Tech Info for Excellent Support (TIES) Program

- Situation
  - -- Clerical staff took on technical duties
  - -- Professional staff became support providers
  - -- But there was no way to obtain skills to provide support
- Solution
  - -- CCO provides structured educational program to provide staff with computing skills

Training support staff that grew "wild"
Tech Info for Excellent Support (TIES) Program

Free: training series (9weeks, 1/2 day per week); house calls from CCO staff; after training; &support software (Norton, etc....)

- Cost$
  - -- $80,000 in materials & software over 4 yrs
- Results
  - -- 180 staff completed TIES training series
  - -- 75% participation from IUB departments
  - -- Users received better support
- Tangential Results
  - -- Decline in phone calls to Support Center
  - -- Nature of calls, more complex/tougher questions

Creating a network of computing support staff
Partners in Support (PICS) Program

- Situation
  - – Support not connected, coordinated, well-supported
  - – Departments spending $s on support tools (or not)
  - – Local support providers (lsp) needed info from CCO
- Solution
  - – CCO provides a forum for fostering:
    - Technical education
    - *Information sharing*
    - LSP networking
  - – Provides Netware server with support tools

Creating a network of computing support staff
Partners in Support (PICS) Program

NOT A USER GROUP --A TRUE PARTNERSHIP!

- PICS:
  - Directory of services & service providers
  - Mailing list, announcements, information, job openings, vendor news, etc...
  - Workshops on technology issues
  - Forums --with conference formats
  - Server filled with goodies!
  - Support utilities for Intel, Mac, Netware
  - Support CDs from various electronic publishers
  - *Software distribution*

Creating a network of computing support staff
Partners in Support (PICS) Program

- Cost$
  - $80,000 in supplies & expenses over 2yrs
  - 1/2 FTE/year of CCO staff
- Results
  - Users get better support
  - LSPs recognize, know, & work with each other
  - CCO became valued resource for LSPs
  - LSPs satisfaction with CCO increased
- Tangential results
  - *CCO got out of end-user support business*
  - Departments invested in human resources rather than tools

Then we were finished.....

Yeah, right.....

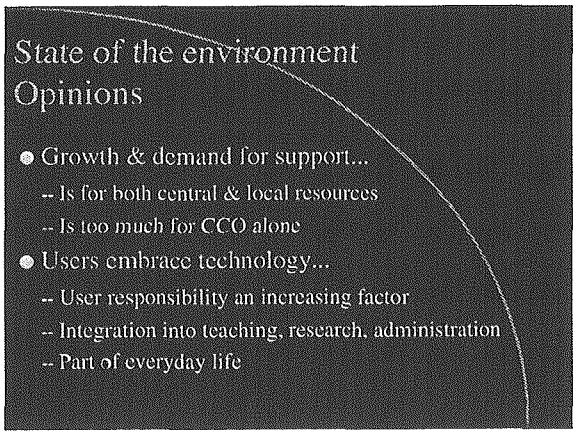
Where we were in 1994....

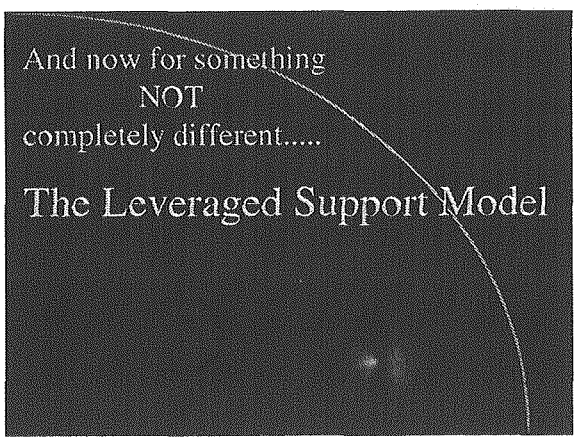
- 200 departments on IUB campus
- 150+ LSPs on the IUB campus
- 6 regional campus computing centers
- Half-million $ investment made over 5 yrs
- CCO staff still at 25% of overall resource

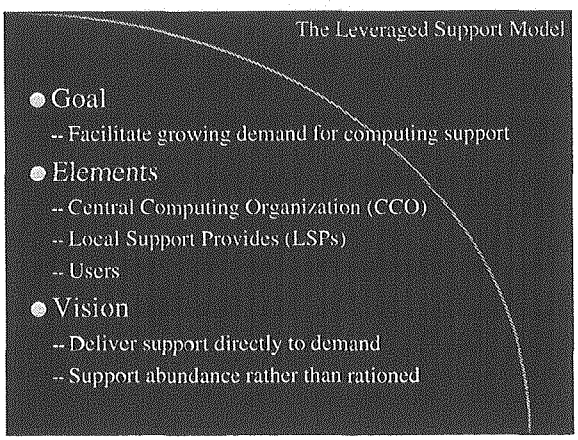
Still, the demand for support grew.....

State of the environment Observations

- Computing use continues to grow
  - Centrally served computing
  - PC computing on desktops
  - Local workgroup computing
- Computing use is distributed
  - Client/Server applications
  - LAN applications --file sharing, application launching, etc.....
- Computing Support is distributed & growing
  - LSPs exist, covering 90% of IUB campus
  - New LSP positions open weekly
- Computing & computing support are linked


State of the environment
Opinions
Growth & demand for support...
-- Is for both central & local resources
-- Is too much for CCO alone
Users embrace technology...
-- User responsibility an increasing factor
-- Integration into teaching, research, administration
-- Part of everyday life


And now for something
NOT
completely different.....
The Leveraged Support Model


The Leveraged Support Model
Goal
-- Facilitate growing demand for computing support
Elements
-- Central Computing Organization (CCO)
-- Local Support Provides (LSPs)
-- Users
Vision
-- Deliver support directly to demand
-- Support abundance rather than rationed

Principles

- Empower!
  - -- User to support themselves
  - -- LSPs to provide support to their users
  - -- CCO staff to provide education & training to LSPs & users for further empowerment

Roles of the user, LSP, CCO

- Users
  - Basic knowledge & skills in majority of tools used regularly
- LSPs
  - Advanced knowledge & skills to support majority of their users
- CCO provides....
  - Infrastructure
  - Advanced & specialized support
  - Support to LSPs
  - Knowledge bases
  - Problem tracking & resolution
  - -- Information resources
  - -- Tools
  - -- LSP & user training
  - -- Technology assessment

Roles of the Central Computing Organization

-- detailed baseline services

-- computing support infrastructure

- Targeted application/technology area support
  - Data management support
  - Statistical & mathematical computing
  - Unix workstation/server systems
  - Textual processing
  - Instructional technology
  - LAN management
  - Student computing facilities & support (tech fee funded)

Roles of the CCO
When to charge for what you do....

- When the CCO provides service or support .....
  - That is an LSP responsibility
  - For a user when the user could support themselves if they employed tools & education opportunities provided by CCO
  - That is not defined as a CCO, LSP, nor user responsibility

Enhancing distributed support
The next level of the Distributed Support Program

- Existing programs were:
  - Ending.... DSA "seeding" was accomplished
  - Not meeting all needs....
    TIES training needed to do more
  - Successful & new users were found....
    PICS demands for utilities & tools grew
    & software distribution became necessary

Initiative was needed!

Enhancing Distributed Support Initiative (EDSI)

A 3-yr $350,000 initiative (1994-97) to bring about Leveraged Support Environment at Indiana University

- Components:
  - Support delivery automation knowledge base & problem tracking/resolution system
  - Education/certification of LSPs
  - Growth of PICS tools & workshops
  - Software information & distribution to help users & LSPs view aspects of wide variety of products covered under university licenses

Enhancing Distributed Support Initiative (EDSI)

Support delivery automation

- The KB (Knowledge Base)
  - A Web interface linked to a database of support info. accessed by a search engine --we call it UCSHelp Online
    http://www.indiana.edu/~ucshelp/
  - To answer the majority of users & LSPs
  - To report problems that the KB doesn't yet have solutions
  - Replaces CCO helpdesk (phone, walk-in, e-mail) functions
- Cost:
  - $150,000 over 3-yrs
  - Conversion of direct support resources
  - Care & feed of KB (2 *FTE* yr to 4 *FTE* now to 7 by '97)

Enhancing Distributed Support Initiative (EDSI)

Support delivery automation

- Progress
  - 8,500 hit/month (IUB, other IU campuses, & other institutions around the world)
  - Even initial form is primary support mechanism for some smaller institutions
  - Nearly all LSPs use as their first stop to seek solutions
  - 15% user community making use as their first stop (only in 3rd month of service to end users)
  - Web-based tools allow growth to be met

Enhancing Distributed Support Initiative (EDSI)
Education & certification

- TIES needed to adapt & be enriched
- Perceived need to verify learning
- Designed for LSPs & other computing support professionals
- In our own best interest --offered at no charge

- Cost$:
  - $150,000 over 3-yrs + 3 FTE staff time per yr
- Goals:
  - To raise the level of technical expertise in LSPs
  - To provide a way for LSPs to be acknowledged for their expertise
  - To offer professional growth & career development
  - To provide a solid technical infrastructure

The Leveraged Support Model

Enhancing Distributed Support Initiative (EDSI)
Education & certification

- Components:
  - Participants must be ready -- pretesting
  - Intensive 2-3 day hands-on sessions, high teacher/student ratio
  - Labs, quizzes, homework, & scheduled final testing
- Available now:
  - Supporting PC Hardware -- Sybase*
  - Supporting DOS & Windows -- Powerbuilder*
  - LAN Administration (2 levels) -- Windows 95
  - Supporting the Macintosh -- Windows NT
  - Unix Administration -- FoxPro/Programmers

**facilitated by our partnership with Sybase inc.*

The Leveraged Support Model

Enhancing Distributed Support Initiative (EDSI)
Education & certification

- Progress
  - Since Dec '94, over 400 certifications
  - High rate of success of participants "achieving" certification
  - Evaluation ratings from participants very high
- Where we're headed --> leveraged delivery format
  - Via the Web: instructional modules, tutorials, quizzes, checklists & info on how to prepare & what to expect

    http://www.indiana.edu/~ucsep
  - Assigned mentors
  - Computer-based tutorials
  - Interactive video broadcasts & taped broadcasts

Enhancing Distributed Support Initiative (EDSI)
PICS tools & workshops

- Expanding & adapting this successful program
  - PICS server beefed up: more tools, utilities, power....!
  - PICS workshops to: preview new technologies, share CCO strategies & objectives, facilitate peer sharing
  - Retreats with LSPs to:
    - Share directions & received feedback/input
    - Identify "to do" lists to fine tune services for LSPs
  - LSP advisory board
    - "Took over" an existing forum
    - *Monthly meetings to share info & get direction*

Enhancing Distributed Support Initiative (EDSI)
PICS tools & workshops

- New things:
  - Delivering computer-based-training
  - Integration with SoftServe
  - Working to provide facility for LSPs to deliver training to their users
- **PICS on the Web:**
  http://www.indiana.edu/~ucsdcas/newpics.html

Enhancing Distributed Support Initiative (EDSI)
Software information matrix & distribution

- Facilitates abundant support for software
- Via the Web, provides users with information on:
  - Software products (spreadsheets, databases, word processors, statistical & mathematical, etc.....)
  - Functionality of the product (UCS staff opinion)
  - Availability & location of electronic Help resources
  - Availability of the product (where to buy it)
  - Local support & training for the product

The Leveraged Support Model

Enhancing Distributed Support Initiative (EDSI)
Software information matrix & distribution

- Support types
  - Fully supported by CCO
  - Supported by other service providers at IU system
  - Supported via information base accessed by users provided as part of CCO infrastructure
  - Users work directly with vendor (free or for charge)
- Software Matrix on the Web:
  http://www.indiana.edu/swinfo/

The Leveraged Support Model

Enhancing Distributed Support Initiative (EDSI)
Software information matrix & distribution

- SoftServe
  - A Netware server with application installation utility for users to get on their PCs & Macs, or to make disks
  - Campus or university site licenses:
    - Novell contract (WP, Presentation, Workgroup, etc....)
    - Communications kernels
    - Virus detection/protection
- Possibilities:
  - Selling software via SoftServe
  - Providing Web-based distribution

The Leveraged Support Model

Enhancing Distributed Support Initiative (EDSI)

Check out what we're doing at these Web pages

- UCS help online *http://www.indiana.edu/~ucshelp/*
- EdCert *http://www.indiana.edu/~ucsep*
- PICS *http://www.indiana.edu/~ucsdcas/newpics.html*
- Software info *http://www.indiana.edu/~swinfo/*

All are offered at no charge to users & LSPs

Enhancing Distributed Support Initiative (EDSI)
Problems --how the sewers backed up in Utopia

- Distributed support is expensive to the institution
  - Loss of economies of scale/departments become islands
    - Lack of consistency in job descriptions & pay
  - Demand is outracing supply for talented staff
    - *Drives up cost of labor; competition is stiff*
    - CCO is losing talented staff to departments who can pay more (no inter-organizational equity concerns)
  - CCO takes a new place on the talent "food chain"
  - *Solutions are not easy, but are being sought...*

Enhancing Distributed Support Initiative (EDSI)
Problems --how the sewers backed up in Utopia

- Traditional services --pulled too fast
- Fight fires --or-- build the sprinkler system?
- Dissatisfaction as key services for users shrank
- Re-investment needed for traditional support ($250,000 in staff/one time, over next 1.5 yrs)

Enhancing Distributed Support Initiative (EDSI)
Problems --how the sewers backed up in Utopia

- *New Web-based services are nice but.... if you don't have a* Netscape-capable machine, you can't play the new game
- At IUB, we estimate $3million is needed to bring all faculty & academic staff up to 486/8mb or better. Better than we thought, but still a major investment.
- Departments need to better leverage their capital resources
- Institution may want to consider computing part of human resource expenses, much like benefits ($1000/FTE/year)

The Leveraged Support Model

Now are we done????

Only for today.

Tomorrow beckons....

The Leveraged Support Model

What's next?

Distributed development & data management

- Doing the same for information management
  - Distributed development support program already in gear
  - Pool of departmental developers -- like DSA
  - Education in tools/methods -- like TIES/EdCert
  - Developers resource center -- like PICS
- Keep a watchful eye on:
  - Future of Client/Server
  - Web-based applications
  - New "cheap & skinny" PCs
- Possibility of re-centralization of computing
  - Decentralized rather than distributed

The Leveraged Support Model

Questions???

See us at our poster session for details

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