

Electronic Grading

Presentation at Bryn Mawr

June 9, 2005

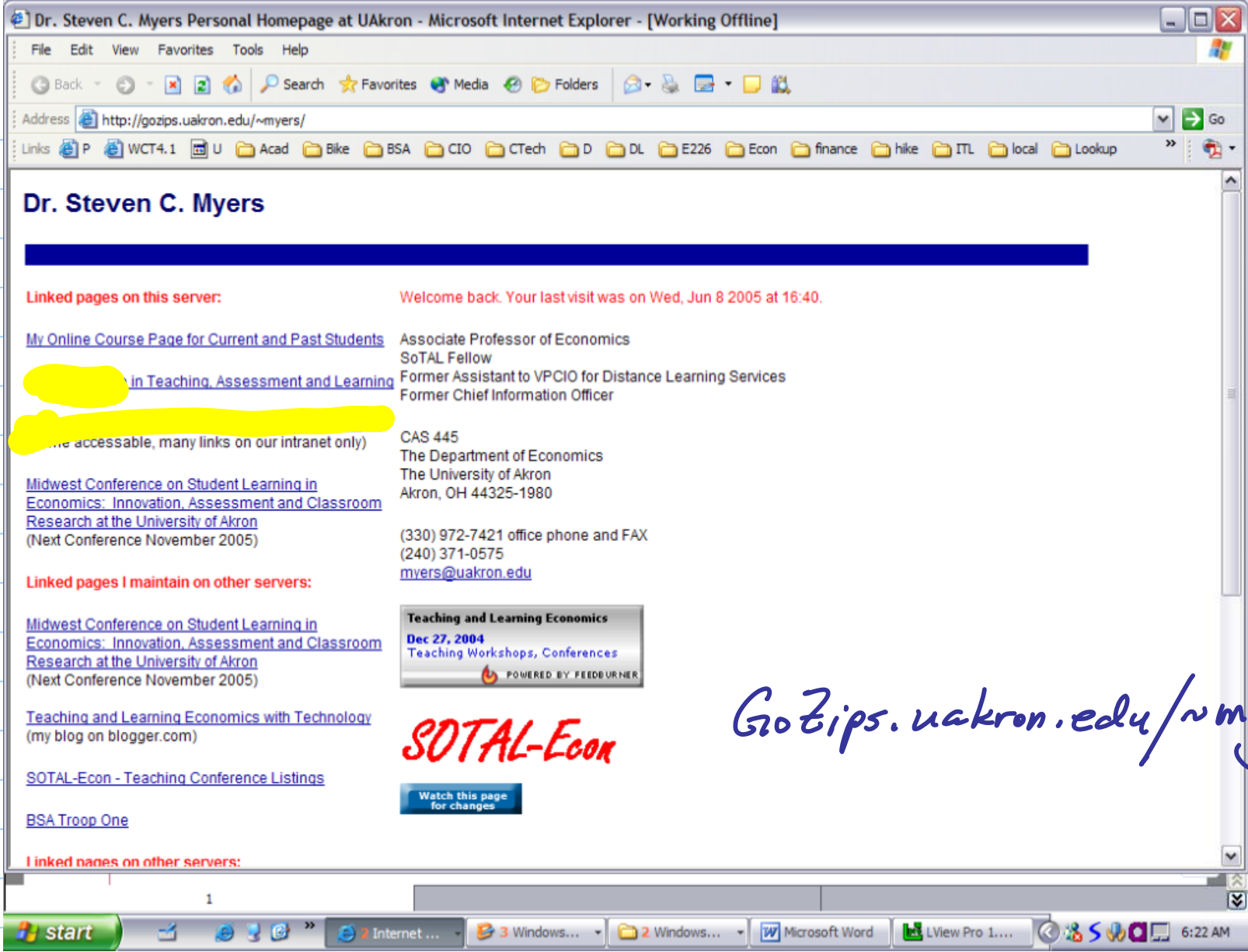
Note Title

6/9/2005

Steve Myers
Department of Economics
The University of Akron

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myers@uakron.edu

- (1) Who I am - what I do.
- (2) Six Uses of Technology to Improve Teaching & Learning
Curriculum Reform & Writing - How Technology Saves Lives
- (3) Examples of Electronic Submission and Markup
- (4) Workshop on Markup tools
- (5) Practice using those tools



Dr. Steven C. Myers

Linked pages on this server:

Welcome back. Your last visit was on Wed, Jun 8 2005 at 16:40.

[My Online Course Page for Current and Past Students](#)

Associate Professor of Economics
SoTAL Fellow
Former Assistant to VPCIO for Distance Learning Services
Former Chief Information Officer

[\[Redacted\]](#) [in Teaching, Assessment and Learning](#)

[\[Redacted\]](#) (not accessible, many links on our intranet only)

CAS 445
The Department of Economics
The University of Akron
Akron, OH 44325-1980

[Midwest Conference on Student Learning in Economics: Innovation, Assessment and Classroom Research at the University of Akron](#)
(Next Conference November 2005)

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Linked pages I maintain on other servers:

[Midwest Conference on Student Learning in Economics: Innovation, Assessment and Classroom Research at the University of Akron](#)
(Next Conference November 2005)

Teaching and Learning Economics
Dec 27, 2004
Teaching Workshops, Conferences
POWERED BY FEEDBURNER

[Teaching and Learning Economics with Technology](#)
(my blog on blogger.com)

SOTAL-Econ

[SOTAL-Econ - Teaching Conference Listings](#)

Watch this page for changes

[BSA Troop One](#)

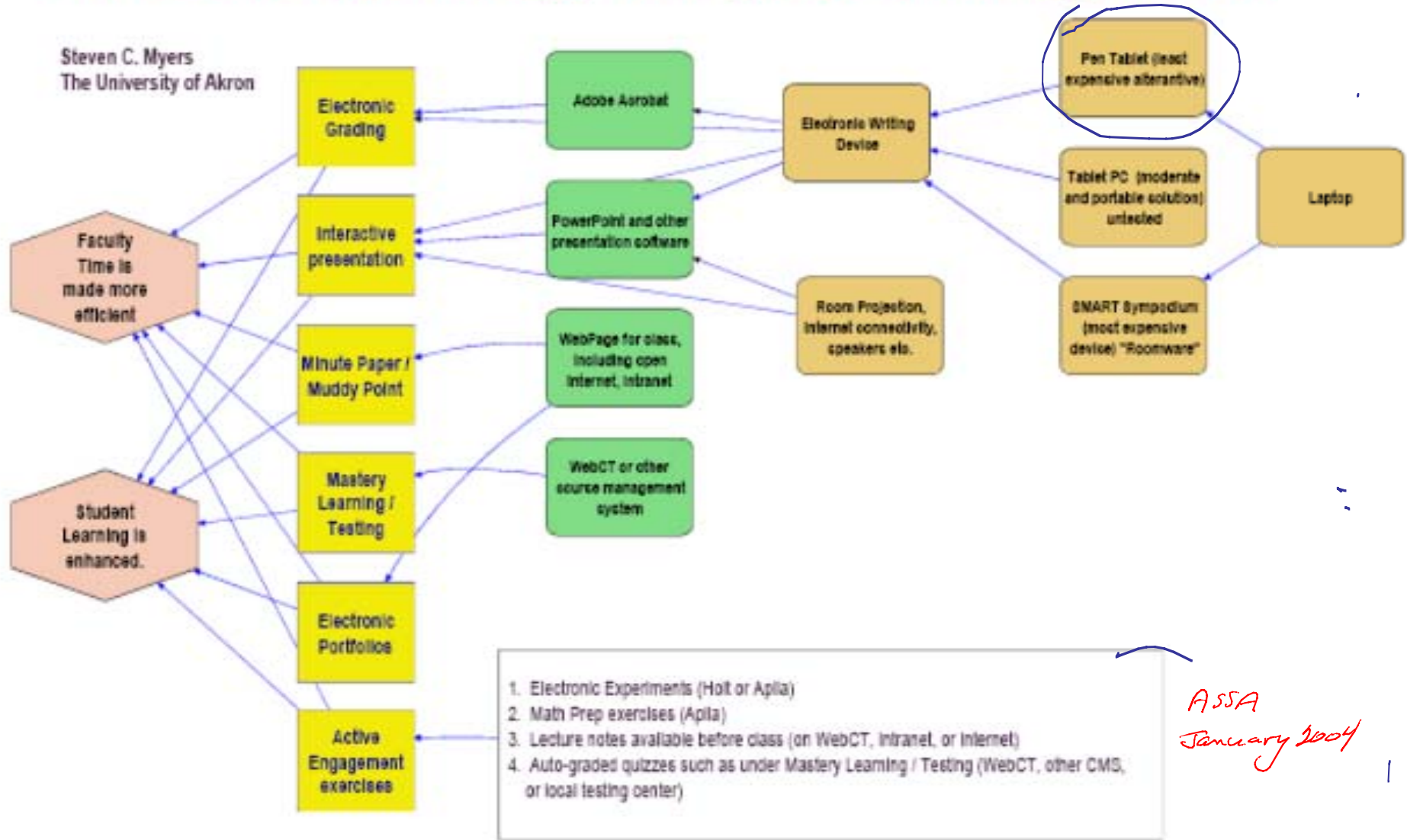
I linked pages on other servers:

Gozips.uakron.edu/~myers



Six Uses of Technology To Improve Teaching and Learning

Steven C. Myers
The University of Akron



1. Electronic Experiments (Holt or Aplia)
2. Math Prep exercises (Aplia)
3. Lecture notes available before class (on WebCT, Intranet, or Internet)
4. Auto-graded quizzes such as under Mastery Learning / Testing (WebCT, other CMS, or local testing center)

Suggested B.S. Labor Economics sequence (version 3a)

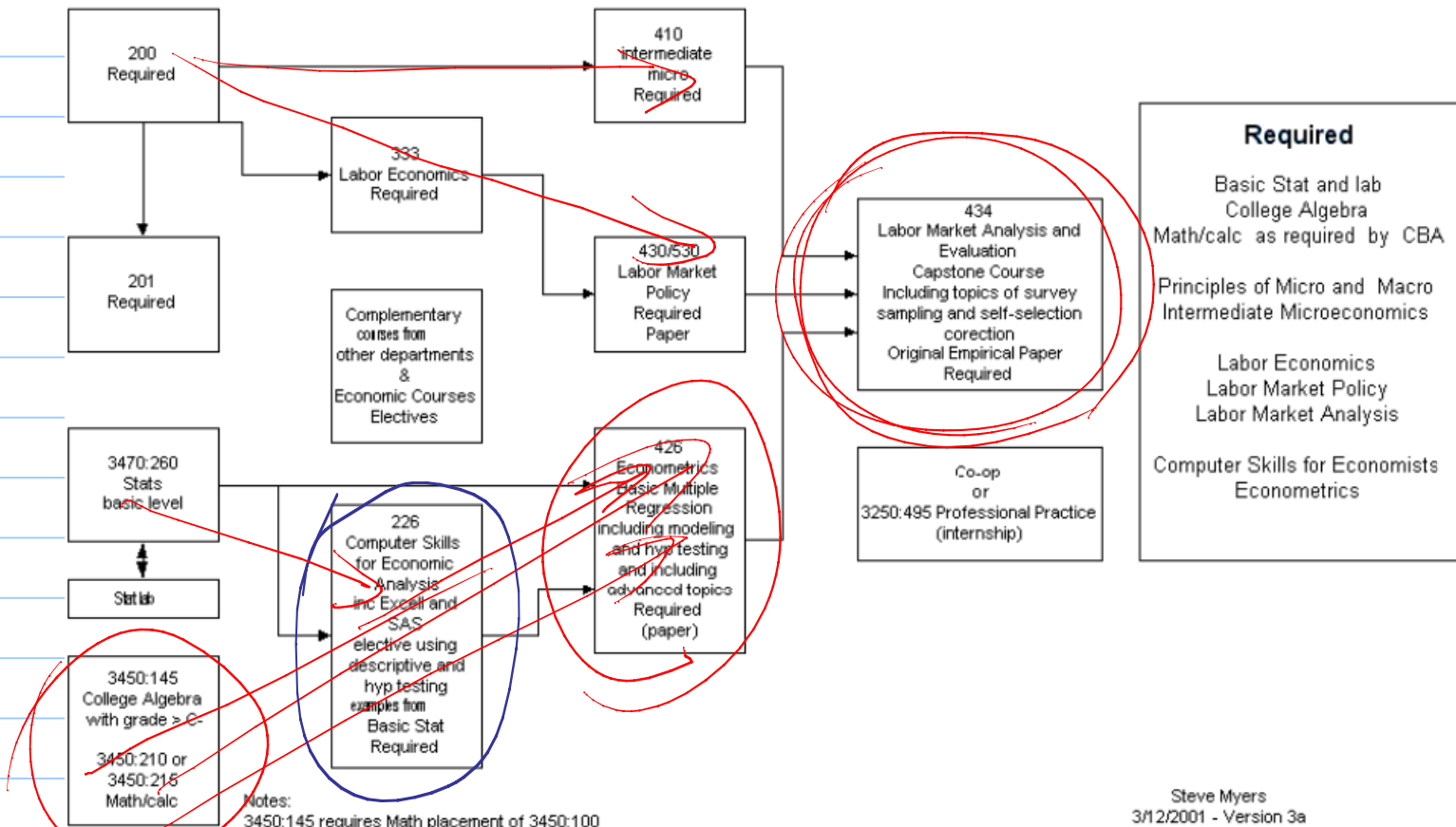
Suggested name: B.S. Labor Market Analysis

Modify Labor Courses and Sequencing

Develop econometrics sequence to complement the Labor Course Sequence

Develop Capstone Course which requires mastery of both Sequences

All Course numbers refer to courses in the economics department (3250) unless specified



Steve Myers
 3/12/2001 - Version 3a
 Add suggested course numbering and sequencing
 11/21/2000 - Version 2
 Eliminate Econometrics 2, change prerequisite for L Mkt Policy
 and Labor Analysis
 11/20/2000 - Version 1

A New Type of Whiteboard



(1) Aiptek Tablet



(2) SMART Symposium



(3) Tablet PC



Written using an Aiptek tablet

$$E(ax+b) = aE(x) + b$$

$$\begin{aligned} \int (ax+b) f(x) dx &= \int ax f(x) dx + \int b f(x) dx \\ &= a \int x f(x) dx + b \int f(x) dx \\ &= a E(x) + b \end{aligned}$$

$$V(ax+b) = a^2 V(x)$$

$$\begin{aligned} &= E\left[\left((ax+b) - E(ax+b)\right)^2\right] \\ &= E\left[\left(a(x) + b - aE(x) - b\right)^2\right] = E\left[\left(a(x - E(x))\right)^2\right] \\ &= a^2 E\left[(x - E(x))^2\right] \\ &= a^2 V(x) \end{aligned}$$

$\int x dx =$

Written with SMART Sympodium

$$E(ax+b) = aE(x) + b$$

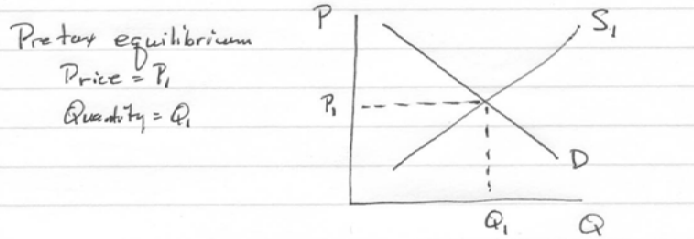
$$\begin{aligned}\int (ax+b)f(x)dx &= \int axf(x)dx + \int bf(x)dx \\ &= a \int xf(x)dx + b \int f(x)dx \\ &= aE(x) + b\end{aligned}$$

$$V(ax+b) = a^2V(x)$$

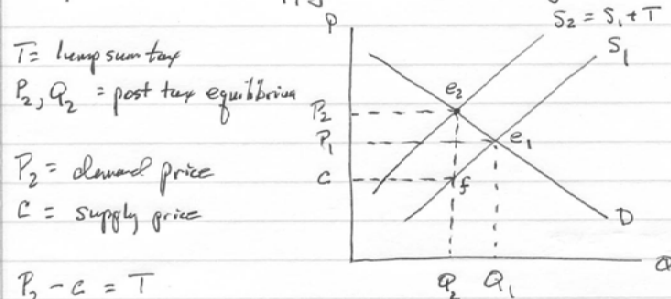
$$\begin{aligned}&= E\left[\left((ax+b) - E(ax+b)\right)^2\right] \\ &= E\left[\left((ax+b) - aE(x) - b\right)^2\right] = E\left[\left(a(x - E(x))\right)^2\right] \\ &= a^2 E\left[x - E(x)\right] = a^2V(x)\end{aligned}$$

$E(x) = \int xf(x)dx$
with the
Tablet PC.

Calculation of Deadweight Loss for a tax on Suppliers



Levy tax on S; Supply shifts leftward from S_1 to S_2



$P_2 - c = T$
 $T \times Q_2 =$ tax revenue (area $P_2 c f e_2$)

Due to tax:

loss of Consumer Surplus	$P_1 P_2 e_2 e_1$	} These define areas
+ loss of Producer Surplus	$P_1 c f e_1$	
= loss of surplus	$P_2 c f e_1 e_2$	

Dead weight loss

= loss of surplus - gain of Tax Revenue
= $P_2 c f e_1 e_2 - P_2 c f e_2 = e_1 e_2 f$

Written with pen on paper and scanned.

Student / Faculty input

originate;

(1) pen & paper → scanned

→ faxed

→ document

management
system (copier)

(2) Tablet PC

Once the original document is digital

then (1) email to professor

(2) use web link/cgi to send

(3) upload to server

(4) upload to CMS

Important: Adoption of naming convention

and other document management rules.

Electronic Grading

Student

① handwritten

↳ SCANNED
OR FAXED

email or
placed on
file server
or uploaded
to WebCT

② typeset

Professor

reads file
e.g., Word or PDF



emails to student
or
leaves on server

Uses Acrobat or Word
& The Digital Pen to grade

Example: E226 Module 2

"Write an essay on something that makes you curious."

(1) Name the file

UAnetID - Module 2 .doc

UAnetID - Module 2 - a .doc

- b

- c

(2) Upload to secure server

(3) IF email includes E226 in Subject.

The Writing Assignment after Module 2

[Examples]

is a learning assessment, example

- (1) What have I learned
- (2) What questions remain
- (3) What are the muddy points
- (4) What recommendations do you have for the course

Using Technology to mark student submissions

3 environments for markup.

	<u>extension</u>	<u>How</u>	<u>Return as</u>
MS Word	doc	save	doc or pdf
Adobe Acrobat	pdf	print driver	pdf / secure
Windows Journal	jnt	print driver	jnt or pdf or mht

Commenting in Adobe Acrobat, MS Word and Windows Journal

	Adobe Acrobat	Windows Journal	MS Word
Type comment	Note tool	Insert text box	Insert comment
Write Comment	NA	Pen	Insert ink comment
Write & draw	Pencil tool	Pen tool	Insert ink annotation
erase	Pencil eraser	Erase tool / pen top	Eraser
Put type in box	Text box tool	Insert text box	Insert text box
highlight	Highlight text tool	highlighter	Highlight tool (on review toolbar) And pen choices on comment toolbar
New page	Document/pages/insert (must have a blank pdf file created)	Insert new page	Ctrl-enter
More space	NA	Insert / remove tool	Enter
Output choices	Pdf, print to jnt, doc (not very good)	print to Pdf, jnt	Print to Pdf, doc, print to jnt

Post presentation notes ---

(1) Answer tool .com

(2) Specific mention of Efar.com, fax gateways,
networked copiers.