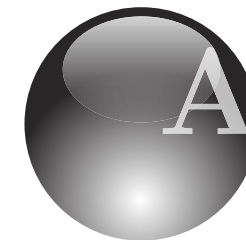


# AcroT<sub>E</sub>X Magazine

## AcroT<sub>E</sub>X eEducational System Tools



### **Overview: All you need to imagine**

AcroT<sub>E</sub>X eEducational System provides a unified set of authoring tools

### **AcroT<sub>E</sub>X eEducation Bundle**

The core of AeST, providing page layout, form support, environments for composing interactive exercises, and quizzes

### **eqExam**

The ultimate L<sup>A</sup>T<sub>E</sub>X package for authoring exams, quizzes and homework assignments for paper

### **AeB Pro**

Access the many advanced features of Adobe Acrobat and Adobe Reader using AeB Pro

### **AcroT<sub>E</sub>X Presentation Bundle**

Take a unique approach to authoring your presentations using APB

### **@EASE**

AcroT<sub>E</sub>X Exam Assembly System Environment. Build a database of test questions, view and select the questions, automatically assembly the L<sup>A</sup>T<sub>E</sub>X exam. Be at ease with @EASE!

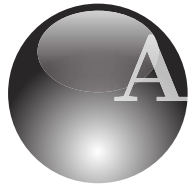
### **Games**

Easily create Jeopardy-like and matching games, as well as electronic practice cards—eCards—to challenge your students, while stimulating interest in the material

### **Downloads**

Links to download these exciting products

**AcroT<sub>E</sub>X eEducational System Tools All you need to imagine**



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## Overview: All you need to imagine

The **AcroTeX eDucational System Tools (AeST)** is a collection of  $\text{\LaTeX}$  packages that work together to provide a comprehensive system for authoring high-quality and visually pleasing interactive digital documents.

The **AeST** is designed for educators who wish to write tutorials, topical essays, presentations, exams, quizzes or assignments. The content can be written for the screen, or optionally, for paper.

For digital documents, using the **AcroTeX eDucation Bundle (AeB)**, it is easy to create exercises and quizzes for self-paced study. Links are provided to the solutions, and the quizzes are self-marking so the student can evaluate the current state of understanding.

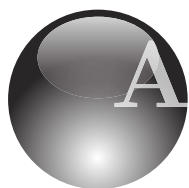
For paper documents, **eqExam** is used to create exams, quizzes and other assignments. Solutions can be initially excluded from the document, and later included for an answer key. There is a system, called **@EASE**, for creating a database of problems. The problems can then be selected—through a PDF interface—for inclusion in an exam.

One of the most exciting components of **AeST** is the **AcroTeX Presentation Bundle (APB)**. **APB** uses a new and unique approach to creating (PowerPoint-like) presentations; there is a one-to-one correspondence between pages and slides. In addition to the usual talking points, **APB** features include rollovers (to supply greater content per page, with a reduction in page space) and animations.

For those who use games to enhance the learning of their students, there are two game components of **AeST**; they are **JavaScript Jeopardy Game (JJ\_Game)** and **Das Puzzle Spiel (DPS)**. The first is based on the famous Jeopardy t.v. game show, and the second is a matching game. Both are easy to create for your students to have an enjoyable learning experience.

The **AeST** example files illustrate most all features, and can stimulate your imagination. There are plenty of ways for a document author to extend the capabilities of **AeST** to make an imagined feature or dazzling effect come true!

We supply the tools, *you supply the imagination!*



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## AeB: AcroTeX eDucation Bundle

**AeB** is the “core” API for **AeST**, all other components draw on these: **Web**, **Exerquiz**, **eForms** and **insDLJS**. Each of these has a specific role to play in the creation of an interactive PDF; while each is a stand alone package, they were designed to work together.

### Web

The **Web** package is used to lay out the screen dimensions of your digital document. It contains extensive commands for controlling the sectioning, running footers and headers.

There is a template manager that allows the document author to apply color to the background page, add a graphical background, or graphical overlays on top of the background. There is enough flexibility in **Web** to create your own personalized design.

It is through the **Web** package that the PDF Document Information is entered into the document, such metadata as title, author, subject and keywords. Advanced metadata such as copyright status, copyright notice and copyright info URL may also be entered through the **Web** interface.

### Exerquiz

With this powerful and flexible package you can create exercises with the solutions optionally placed at the end of the document, linked to the question. These exercises can be part of an online tutorial, or could simply be an exercise set.

The **Exerquiz** package has two types of quizzes: quizzes with immediate feedback and quizzes with delayed feedback. Quizzes are automatically marked, and solutions can be provided. For online quizzes, the types of questions that can be posed are multiple choice, math fill-in and text fill-in.

### eForms

The document format that is delivered to the student is PDF. At the heart of any interactive document are form fields and a scripting language to process the input. The **eForms** package gives the necessary support for Acrobat forms.

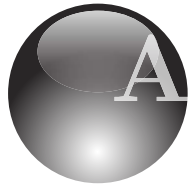
With **eForms** you can create buttons, checkboxes, radio button fields, drop down lists and text fields, as well as associate JavaScript with any of the form field events, such as a mouse up or a rollover event.

**Exerquiz** uses **eForms** silently, and no knowledge of forms or JavaScript is normally needed, but if an author can imagine a new application for Acrobat forms, **eForms** will provide the necessary tools.

### insDLJS

JavaScript can be executed in response to many different events, most notably, document events, page events and field events. The **eForms** component addresses the field events, the **insDLJS** component supplies support for document and page events.

Both **eForms** and **insDLJS** are normally invisible to the average document author, but are critical to the proper functioning of **Exerquiz**, and vital if a document author wishes to go beyond the predefined constructs of **AeST**.



## eqExam: The exam package

**eqExam** is a full-featured exam package which is tightly integrated with **Exerquiz**. The package can be used to create paper documents for exams, quizzes and homework assignments. Solutions can be excluded to obtain a clean document, and later, the same document can be published with solutions for an answer key to the exam, quiz or homework assignment.

The **eqExam** package has several PDF options. When a PDF option is taken, the document becomes electronic: check-boxes become form fields, fill-ins become text fields, and extended response questions become multiline text fields. Thus, **eqExam** can be used to create a document that the student fills in online and prints. Another PDF option allows for submission by email. Server-side script is distributed with **eqExam** which enables the email submission.

The database and exam assembly system **@EASE** uses the **eqExam** to create exams.

College Algebra  
Summer, 2007

Test 3

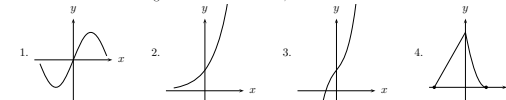
Name: \_\_\_\_\_  
Dr. D. P. Story

**Global Instructions:** (100 points) Solve each problem and box in your final **answer**.

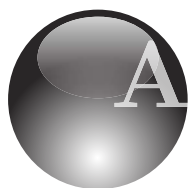
- (2<sup>pts</sup>) 1. True/False questions. Enter 'T' for True and 'F' for False.
- (a) \_\_\_\_\_ The domain of a logarithm function is  $(-\infty, \infty)$ .
  - (b) \_\_\_\_\_ The range of the *inverse* of a function  $f$  is the same as the domain of  $f$ .
  - (c) \_\_\_\_\_ If  $f$  is invertible, then  $f(f^{-1}(w)) = w$ , for all  $w$  in the domain of  $f^{-1}$ .
  - (d) \_\_\_\_\_ To determine whether a function is one-to-one, we use the vertical line test.
  - (e) \_\_\_\_\_ Suppose  $a > 0$  and  $a \neq 1$ . If  $a^u = a^v$ , then it follows that  $u = v$ .
- In the questions that follow, fill in the blank.
- (f) Let  $a > 0$  and  $a \neq 1$ . Then  $w = \log_a(t)$  if and only if  $t =$  \_\_\_\_\_.
  - (g) The natural logarithm is defined to be the logarithm with a base of  $a =$  \_\_\_\_\_.
  - (h) The inverse to the function  $f(x) = \log_3(x)$  is  $f^{-1}(x) =$  \_\_\_\_\_.
  - (i) For all  $x$ ,  $\log_a a^x =$  \_\_\_\_\_ and for all  $x > 0$ ,  $a^{\log_a(x)} =$  \_\_\_\_\_.
  - (j) Let  $f(x) = 3x + 1$  and  $g(x) = 2x^2 - 1$ . Then  $(f \circ g)(-2) =$  \_\_\_\_\_.

- (7<sup>pts</sup>) 2. Let  $f(x) = \frac{3}{x-1}$  and  $g(x) = \frac{2}{x}$ . Find the function  $(f \circ g)$  and find its domain. Simply!

- (5<sup>pts</sup>) 3. Indicate which of the following functions are one-to-one, hence invertible.



The functions depicted in graphs \_\_\_\_\_ are one-to-one. (List the number of each graph that is one-to-one, separating each with a comma.)



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## AeB Pro: AeB for Acrobat Professional

The methods and API used in **AeB** are quite general, they can be used to produce interactive PDF using any of the methods commonly available to the  $\text{\LaTeX}$  community. **AeB Pro** is designed for users of **Acrobat 7 Professional** or later that produce PDF using **Adobe Distiller**.

With **AeB Pro**, you have complete control over the initial view of the PDF document, document actions, page actions, fullscreen mode and the setting of transitions effects. Through the  $\text{\LaTeX}$  source file, you can attach documents to the PDF, create links to the attached PDFs, or links to extract embedded files to view or to save. The PDF wrapper file for the embedded files can even act as a PDF Package. Post-distillation document assembly using JavaScript for Acrobat API is also supported.

On the authoring end of the workflow, there is basic support for Optional Content Groups (OCGs or layers) which can be used for rollover effects and animations.

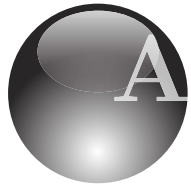
**AeB** and **AeB Pro** truly deliver to authors and publishing houses all the features needed to create high-content, visually rich interactive documents.

The use of **AeB** and **AeB Pro** is not restricted to interactive documents with textual content, you can create PDF based applications, examples of which found in this magazine are **APB**, **@EASE**, eEnvelopes and PDF games.



The above eEnvelope is an example of the type of PDF development that can be done with **AeB** and **AeB Pro**. The eEnvelope contains embedded documents which are sent by email to their recipient. The eEnvelope illustrated above was created using the **aeb\_Envelope** package.

There are many applications like this; you have only to imagine them, **AeB** and **AeB Pro** deliver them!



## APB: AcroTeX Presentation Bundle

**APB** is a revolutionary approach to authoring presentations, whether it is for a professional presentation before an audience or for a presentation that is distributed over the Internet or by computer disk. **APB** uses OCGs (optional content groups, or layers) to incrementally place content such as bullet points on the screen; consequently, there is a one-to-one correspondence between slides and pages. Layers are also used for rollovers, animations and special visual effects.

There is full control over the PDF viewer (Acrobat or Adobe Reader) from the  $\text{\LaTeX}$  source file, and the full range of transition effects are supported, both for transition of pages and *of incremental content*.

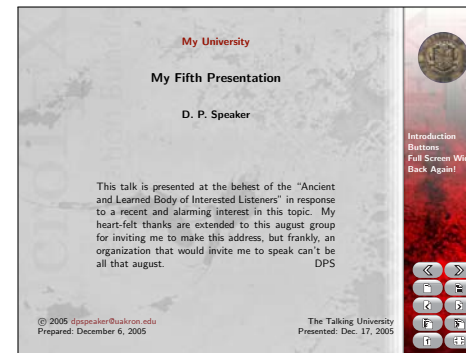
**APB** is shipped with numerous graphical themes—two of which are shown above—and color schemes from which the author can choose. It is easy to incorporate a custom design into the document.

The authoring system allows you to make two sets of notes, one for the speaker and another for the audience. The notes are published along with thumbnail images of the slide presentation.

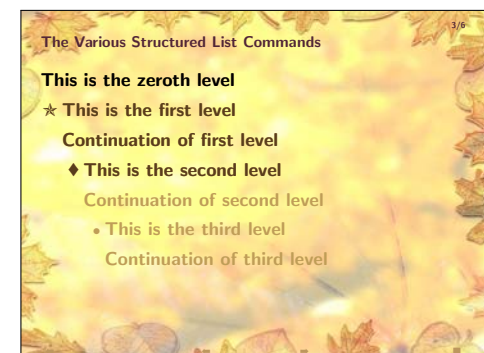
The **AcroTeX Presentation Bundle** is fully compatible with **Exerquiz** (the package used to create exercises and quizzes); consequently, for a mathematical talk, equations, exercises and quizzes can be used as incremental content.

While in fullscreen mode, navigating through the presentation is accomplished via the usual controls (arrow keys, mouse clicks, or a remote presentation device); otherwise, a system of navigation buttons is used.

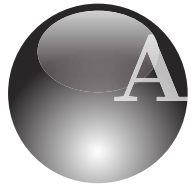
We feel that **APB** is as user-friendly as a  $\text{\LaTeX}$ -based system can be!



A Representative Title Page



Incremental Content



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## @EASE: AcroTeX Exam Assembly System Environment

@EASE is a PDF-based exam database and assembly system.

Instructors and academic departments can develop a database of PDF documents using the **eqExam** Package with special markup. The control document, shown to the right, has a file system to link to and to organize DB documents. Through a PDF interface, questions are selected, then assembled into an **eqExam** document, a  $\LaTeX$  file.

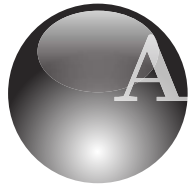
@EASE allows the construction of a *multiple version exam document*; this exam has multiple versions of questions in the same source file. The document author can set a switch to build an exam using only the first of the variations, then build an exam using the second of the variations, and so on. This is useful for preparing exams for courses that have multiple sections.



Be at ease with @EASE!

@EASE Control Panel

The questions selected can be randomized, for multiple choice questions, the response choices can be randomized as well. Within the DB system, questions can have multiple variations, variations are selected at random.



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## Games: Games and eCards

Games stimulate interest in learning, promote creativity, and provide a resource for class projects. All of the game authoring packages listed below suggest that PDF can be used to create simple games that are inexpensive to build and challenging, educational and informative to play.

**JavaScript Jeopardy Game:** Design your own Jeopardy-like game, you determine the number of categories and number of questions per category. Questions can be multiple choice or fill-in (math or text). **JJ\_Game** comes with nine designed color schemes and backgrounds, but it is easy to incorporate your own ideas about color into the game.

A **JJ\_Game** can be assigned to a class for credit. The name of the student must be entered on the first page before being allowed to play the game. When finished, the student prints the gameboard showing the score and submits it for credit. When **AeB Pro** is used, questions are placed in layers and are hidden until they are selected from the gameboard, this gives added security so the student cannot peek at the question, and prevents the student from printing out the whole game.

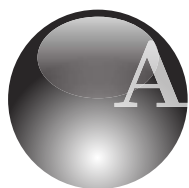
**Das Puzzle Spiel:** A matching game, students must match the question posed in one column with its answer in another column. Questions and answers are randomly listed. **DPS** has a log in feature that will not allow the student to play the game until logged in. After completion, the game can be printed and handed in for credit. For **AeB Pro** users, OCGs are used for extended capabilities.

**eCards:** An electronic version of flash cards. Questions are composed with hints and solutions. The user jumps randomly from question to question. Responding to the questions can be verbal (for self-study), or through keyboard input (multiple choice or fill-in).

Print this page:  Student: A. C. Robot

Time stamp: 07-10-07, 7:20:41.





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## Downloads: Downloads, Pricing and Links

Product	Pricing	URL
AeB	Free	<a href="#">AeB @ AcroTeX.Net</a>
eqExam	Free	<a href="#">AeB @ AcroTeX.Net</a>
AeB Pro <sup>*</sup>	Free	<a href="#">AeB Pro @ AcroTeX.Net</a>
APB	\$29	<a href="#">APB @ AcroTeX.Net</a>
@EASE	\$29	<a href="#">@EASE @ AcroTeX.Net</a>
APB + @EASE	\$52	<a href="#">Purchase &amp; Download</a>
Games <sup>**</sup>	Free	<a href="#">Games @ AcroTeX.Net</a>

\* **AeB Pro:** Acrobat 7 Pro required to create PDF. Some members of **AeB Pro** family include [aeb\\_Envelope](#), [aebXMP](#) (for including Advanced Metadata in a PDF), [AcroSort](#) (which includes the **AeB Slicing** batch sequence), [AcroMemory](#) (a memory matching game).

\*\* **Games:** [JJ\\_Game](#), [Das Puzzle Spiel](#), [eCards](#), [AcroSort](#) (which includes the **AeB Slicing** batch sequence), [AcroMemory](#) (a memory matching game).

**AeST** is a system of integrated  $\LaTeX$  packages for authoring interactive content in PDF. To use **AeST**, you must have experience using  $\LaTeX$  and have a recent  $\TeX$  system up and running. Some of our packages require the use of **Acrobat 7 Pro** and **Adobe Distiller**, most notably **AeB Pro**; otherwise, the use of `pdflatex` and `dvipdfm` is supported. All packages in the **AeST** family are fully documented and come with numerous sample files. There is an [AcroTeX Community Forum](#) where users can pose questions and discuss issues.

To get started in  $\LaTeX$ , go to the [TeX Users Group](#), (TUG). The TUG site has information about  $\LaTeX$ , including short tutorials, and links for acquiring a modern  $\TeX$  system. There are  $\TeX$  organizations for many of the world's countries; in Europe, for example, the German  $\TeX$  organization is [Dante](#).

### AcroTeX Services

**AeST** is an integrated collection of software packages that use a  $\LaTeX$ -to-PDF workflow to produce high quality interactive materials in PDF. **AcroTeX** can produce interactive materials from the client source files for publication on a CD or the Internet. **AcroTeX** can modify its software to meet client specifications. See the [AcroTeX Consulting Services](#) page for further details and samples of our work. A contact form is provided there to initiate communication.

D. P. Story for the **AeST** Team  
<http://www.acrotex.net>