



RF Audience Response System

Instruction Manual

**Manual COPYRIGHT © 2007. All rights reserved.
Program COPYRIGHT © 2007. All rights reserved.**



Table of Contents

1	Introduction	3
2	Package Contents	5
	Basic Package with single receiver.....	5
3	ARS System Components	6
	Instructor Keypad	6
	Audience Keypad	8
	Receiver	9
	ARS Software Program	10
4	Setting up of ARS System	12
	Step 1: Install the receiver.....	12
	Step 2: Install batteries in the remote	12
	Step 3: Install the ARS software	12
	Step 4: Setup the USB Port receiver.....	13
	Step 5: Check version number of ARS Hardware	15
5	Operation of ARS	16
	Start ARS software program.....	16
	Profile	16
	Registration	20
	PowerPoint	22
	Report.....	27
6	Troubleshooting Guidelines	33
7	Technical Specifications	34
8	FAQ	36
	Appendix I Profile File Format	37

1 Introduction

What is ARS (RF Audience Response System)?

ARS is a radio frequency audience response system which enhances interactivity in conferences, lectures and presentations. With button-press on remote controls, ARS allows you to receive instant feedback from up to 3000 users at any one time. The system is equipped with our proprietary Remote Controls, RF Data Receiver and supplementary ARS plug-in software for Microsoft PowerPoint.

What can you do with ARS?

Watch the PowerPoint presentation and feedback with remote controls! ARS enriches your presentation by involving your audience and increasing their attentiveness. The system works as a plug-in with Microsoft PowerPoint, powerful and popular presentation software that supports graphic, video and audio files.

ARS can be used for quizzes, survey, voting, buzz-in games, contests and corporate trainings. The applications are widely used in classrooms, lecture halls, training centers and conference rooms. Functions such as easy-to-operate Answer Editor and automatic generation of statistics and reports make all work easier. The system enables real-time performance tracking, immediate feedback and review. The wireless design saves time, paper and investment costs in networking or purchasing student PC.

System Requirements

- ♣ OS: Microsoft Windows 2000 / XP / 2003
- ♣ Application: Microsoft Office 2000 or later with latest service pack (Must include PowerPoint and Excel); Microsoft .NET Framework 1.1
- ♣ CPU: Pentium III processor 1 GHz or higher
- ♣ RAM: 128MB or above
- ♣ Display: 16-bit High Color or higher
- ♣ USB 1.0/1.1/2.0 port



Precautions

- ♣ Do not drop the remote control. Avoid contact with water.
- ♣ Avoid direct contact of the laser beam to eyes.
- ♣ If batteries have leaked on the remote control, carefully wipe the case clean and load new batteries.

2 Package Contents

Basic Package with single receiver

- ◆ Teacher Remote Control (x 1) with 2 x 1.5V AA battery
- ◆ Student Remote Controls (x license number) with 2 x 1.5V AA batteries
- ◆ Receiver (x1)
- ◆ USB port to mini B Cable (x 1)
- ◆ Instruction Manual (x 1)
- ◆ ARS Software CD-ROM (x 1)

3 ARS System Components

Instructor Keypad



Item	Buttons/ Parts	Functions
1	LCD Display – Access Point	Access Point
2	LCD Display – Connectivity Indicator	✓ – Connected X – Not connected
3	LCD Display – Message	Remote Message
4	Result	Pop up window showing the current quiz results on the screen
5	Buzz In (i)	Switch between the MC and Buzz In question modes
6	Start	Start quiz player in PowerPoint slide show
7	PowerPoint	Switch between Slide Show and Question Edit mode in PowerPoint
8	Left arrow (✓)	Function as "Left arrow" key in PowerPoint
9	Down arrow (...)	Function as "Page Down" key in PowerPoint
10	LCD Display – Remote ID	Remote ID

ARS Instruction Manual

11	Reg	Function key for Register Presentation
12	Stop	Stop the quiz player
13	Report	Display the cumulative score of each student
14	Up arrow (▲)	Function as "Page Up" key in PowerPoint
15	Right arrow (X)	Function as "Right arrow" key in PowerPoint
16	Enter	Function as "Enter" key in PowerPoint

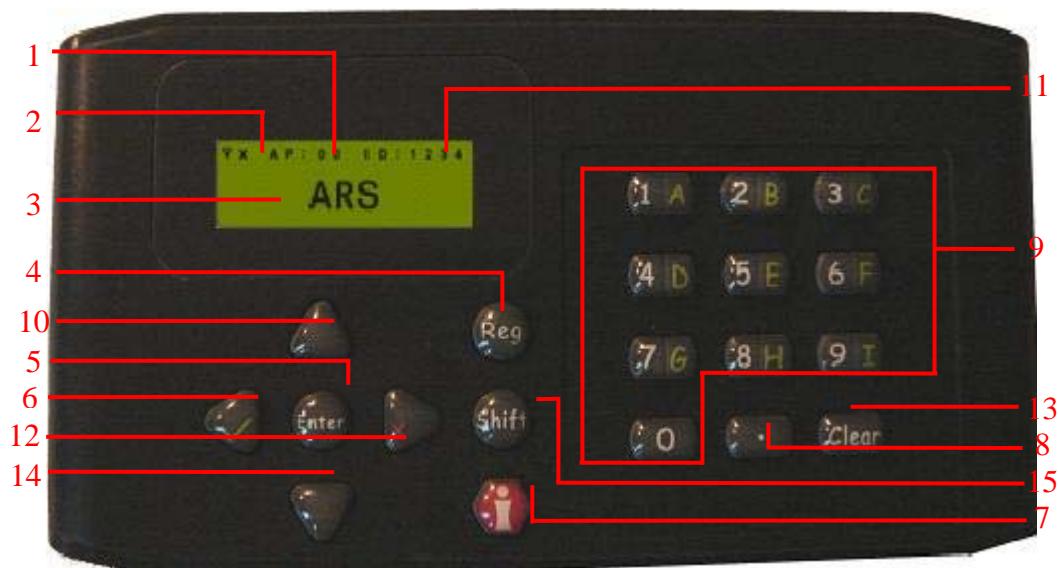
Notes

During the PowerPoint Slide Show, the following computer keyboard hotkeys can be used for ARS operation.

Operation	Keyboard Shortcut Keys
MC	Ctrl + N
Buzz In	Ctrl + B
Start quiz	Ctrl + Z
Stop quiz	Ctrl + X
Previous Question	Alt-Left arrow sign (←)
Next Question	Alt-Right arrow sign (→)
Slide Up	PgUp
Slide Down	PgDn
Show Result	Ctrl + R
Show Report	Ctrl + E
Hide / Show Remote ID Icons	Ctrl + V
Show WhiteBoard	Ctrl + W
Pause quiz	Ctrl + C

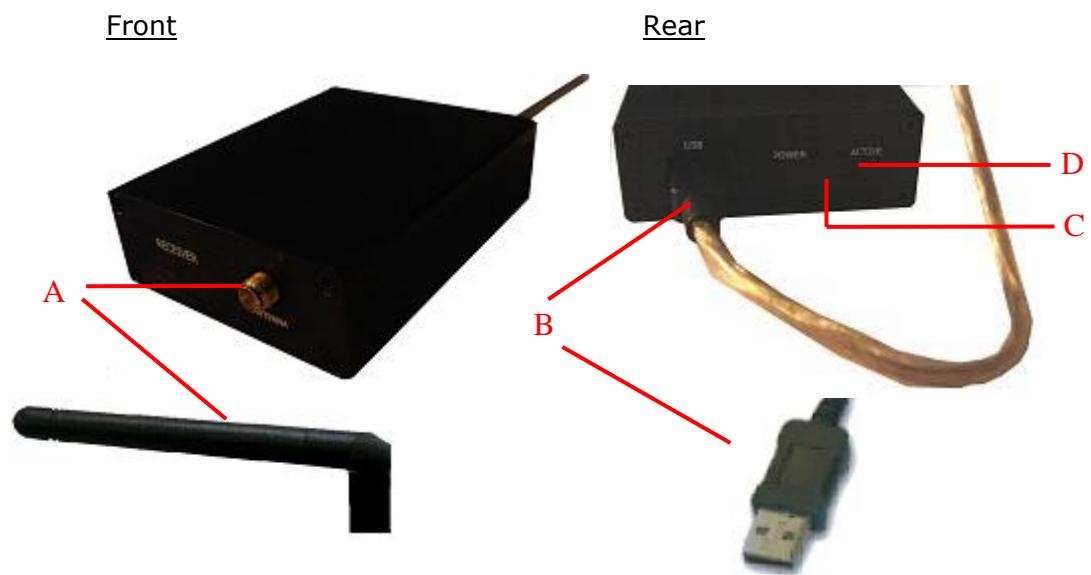
Remarks: Characters listed above are case insensitive.

Audience Keypad



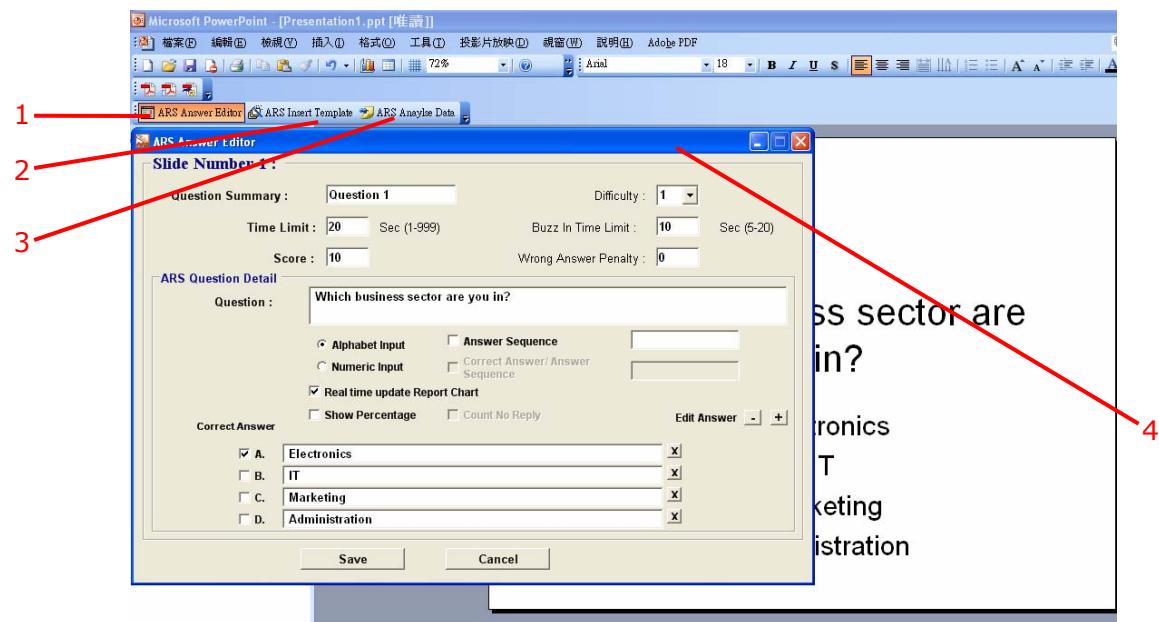
Item	Buttons/ Parts	Functions
1	LCD Display – Access Point	Access Point
2	LCD Display – Connectivity Indicator	✓ – Connected X – Not connected
3	LCD Display – Message	Remote Message
4	Reg	Function key for Register Presentation
5	Enter	Function as "Enter" after input
6	Check (✓)	"True"
7	Buzz In (i)	Reply the buzz-in questions
8	Decimal Point (.)	Decimal Point
9	Answer options (0-9/A-F)	Select an answer from the options
10	Up arrow(▲)	Upward function
11	LCD Display – Remote ID	Remote ID
12	Cross (X)	"False"
13	Clear	Cancel function key
14	Down arrow (▼)	Downward function
15	Shift	Shift between numerical or alphabetical answer option

Receiver



Label	Parts	Functions
A	External antenna & Antenna connector	RF signal receiver. It can be pointed at any heading.
B	USB connecting port & USB connector	Connect to the computer via a USB cable
Notes: For the computer to recognize the receiver device, the USB software driver has to be set up. Make sure all connections are secure.		
C	POWER LED	LED lights up when power supplying by computer USB port
D	ACTIVE LED	LED lights up when RF signal transfer (sending & receiving)

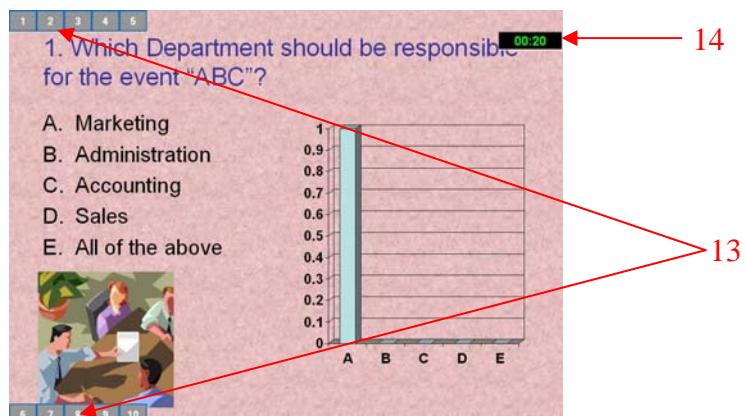
ARS Software Program



Tray icon & pop-up menu



Presentation slide



Item	Functions	Description
1	ARS Answer Editor button	Launches the Microsoft PowerPoint plug-in
2	ARS Insert Template button	Inserts ARS Template for PowerPoint
3	ARS Analyze Data	Associates PowerPoint Information with ARS Answer Editor
4	Answer Editor Dialogue Box	Presets the question summary, time limit, correct answer, question detail, score and difficulty level of the question
5	ARS tray icon	Shortcut of ARS functions
6	Profile	Defines teacher, class and student relation information
7	PowerPoint	Starts the quiz using PowerPoint. The answers can be preset using "ARS Answer Editor"
8	Report	Displays quiz reports
9	Registration	Registers remotes according to database information
10	Setup	Configures Access Point, PowerPoint setting, Report setting and various system settings
11	About	Displays ARS product information
12	Exit	Exits the program
13	Remote ID Icons	Displays the states of response or correctness of answers of corresponding student remotes
14	Timer	Quiz count down timer

4 Setting up of ARS System

Step 1: Install the receiver

Please follow these instructions carefully for receiver regarding connecting distance and antenna angle to ensure proper communication between the audience remotes and the receiver.

- Plug the provided USB cable into the receiver's USB port.
- Plug the other end of USB cable into your computer/laptop's USB port.
- Adjust the receiving antenna can help for boosting communication range and signal quality.
- To optimize the signal reception, it is recommended to adjust the antenna within an angle of **140 degrees** to the audience.
- Adjust the antenna to **horizontal level** for best reception.
- An undesirable antenna position and angle adjustment might affect signal communication and reduce the range of communication. The client remotes may be unable to connect to the receiver in this situation.

Step 2: Install batteries in the remote

The battery compartment is located on the back of the remote.

1. Pull up the covers to open the compartment
2. Use 2 "AA" size batteries (Alkaline recommended)
3. Do not mix used and new batteries
4. Be sure the batteries are inserted properly
5. Drive screws into the holes of the battery compartment doors

Precaution

Remove the batteries from the remote if it is not to be used for a long period of time. If the batteries are used improperly their life will be shortened or their contents may leak.

Step 3: Install the ARS software

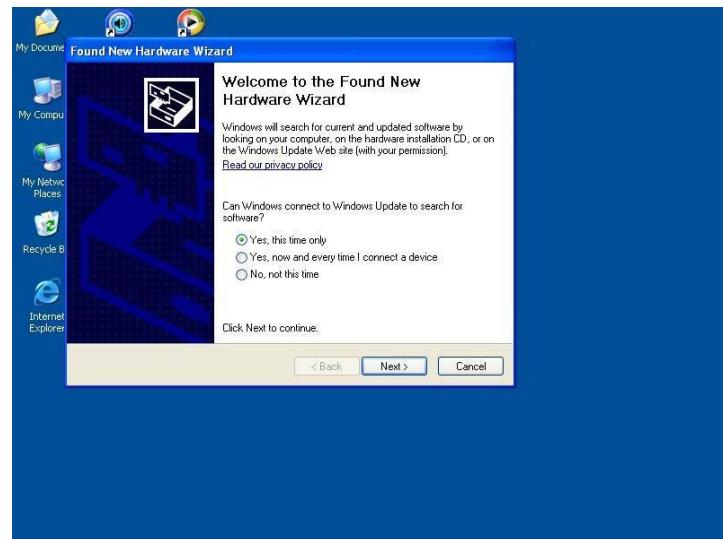
1. Login Windows with an administrator account.
2. Close all running applications.
 - Check whether .Net framework 1.1 has been installed under Add or Remove Programs. If .Net framework 1.1 is not installed, install .Net framework 1.1 from Microsoft Windows Update or from ARS installation CD.
3. Setup ARS by setup.exe in our installation CD.
4. Check device manager to assure the USB driver setup completely.
5. All remotes will turn to sleep mode when it idles for 10 minutes for energy saving reason. The default is 10 minutes, if administrator wants to change the setting; an additional setup program is required.



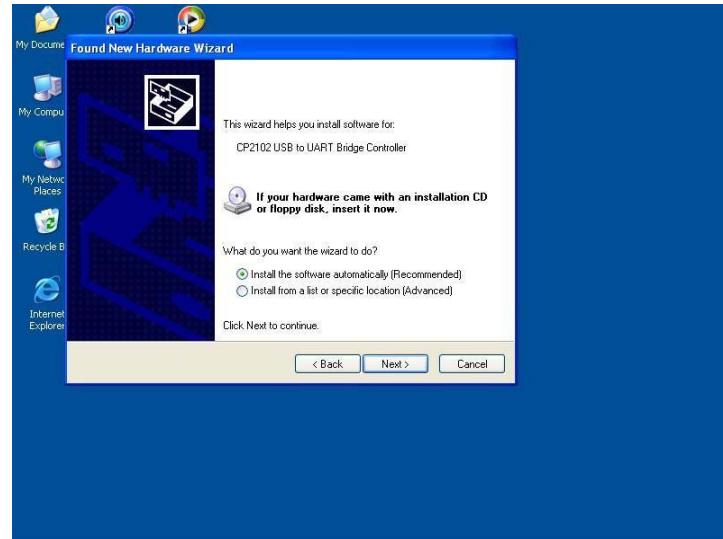
6. ARS shortcut icon will be placed on the desktop.

Step 4: Setup the USB Port receiver

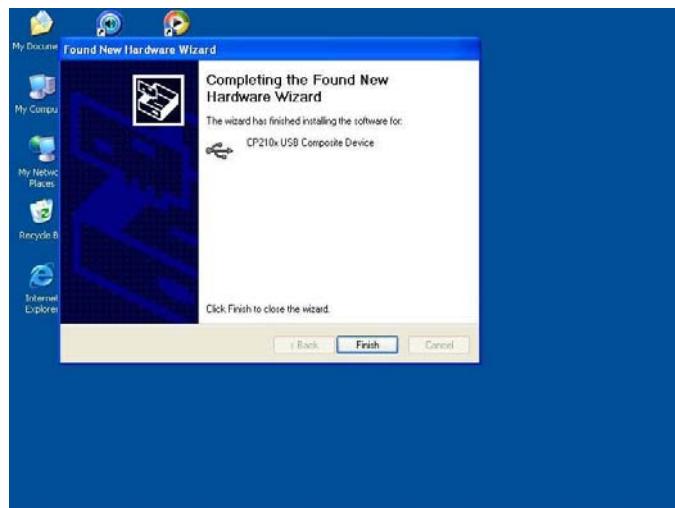
1. Connect the receiver to the computer after installing ARS. The machine will recognize the receiver device and popup a dialog. Select "Yes, this time only" and click "Next>" to setup the driver.



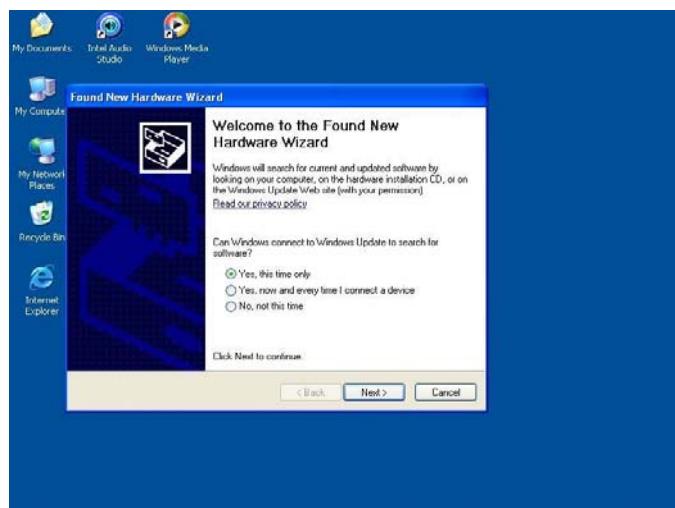
2. Select "Install the software automatically" and click "Next>" to continue.



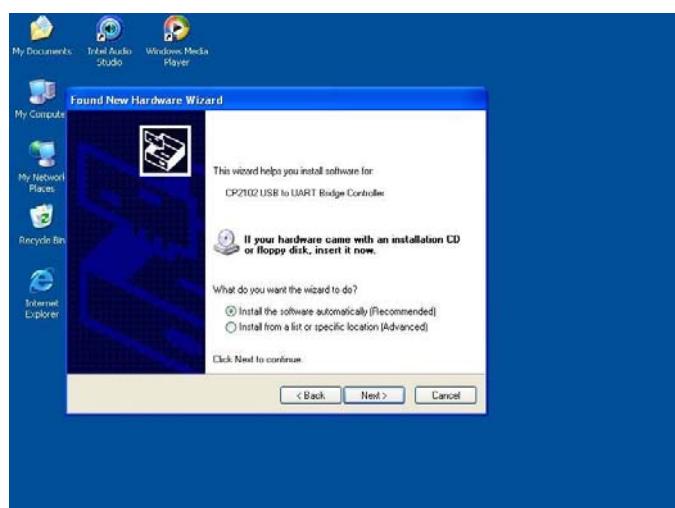
3. Click "Finish" to complete the installation of the USB Composite Device.



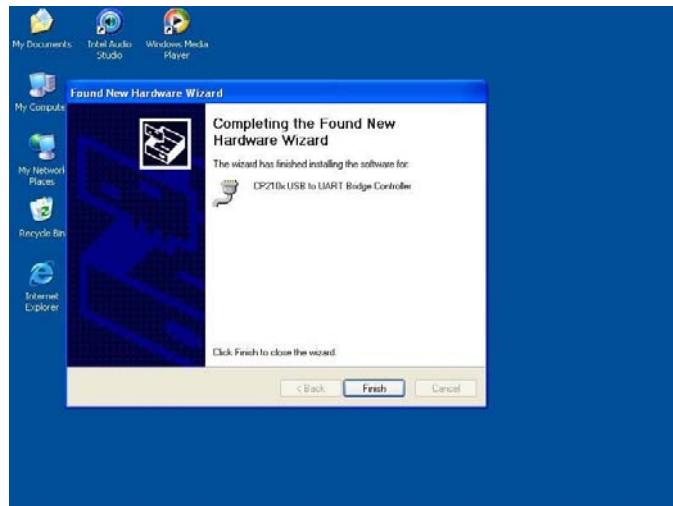
4. Select "Yes, this time only" and click "Next>" to setup the USB device.



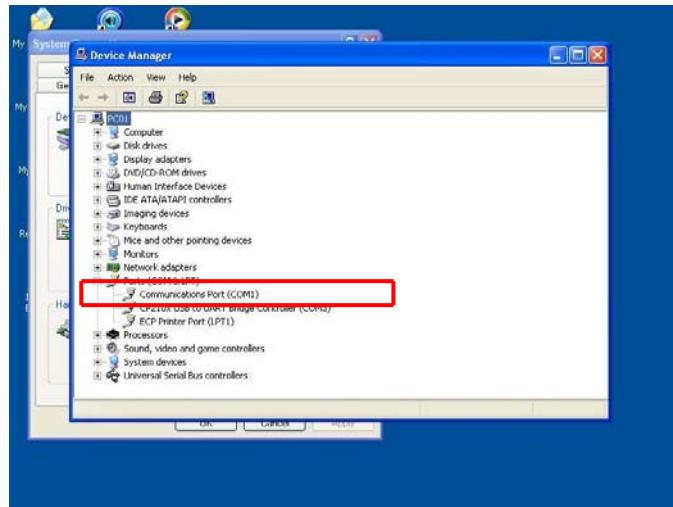
5. Select "Install the software automatically" and click "Next>" to continue.



6. Click "Finish" to complete the driver installation.



7. Double click the **system** icon in the **Control Panel**
8. Click the **Device Manager** Button in **Hardware** tab
9. Right click the **Communications Port (COM# 1 ~ 9)** and check the receiver device.



Step 5: Check version number of ARS Hardware

The hardware version number can be verified by selecting "About" in the tray icon pop-up menu. The version number of hardware is displayed under **Product Details**.

5 Operation of ARS

Start ARS software program

1. Start ARS system by double-clicking the ARS icon  on the desktop.
2. ARS icon is placed on the Windows taskbar.
3. Click the ARS icon, and a menu will pop up.



Profile

Class information (class, teacher and student information) can be predefined for the teacher to use repeatedly at any classroom and any time. Relevant data can be recorded and extracted for various reporting purposes.

- First time usage
 1. Insert student information and teacher information, then create a class to relate them, or
 2. Import teacher and class from specially formatted Comma separated values (*.txt) file.

TXT is a text file format which can be opened with Microsoft Excel and other text editing programs.

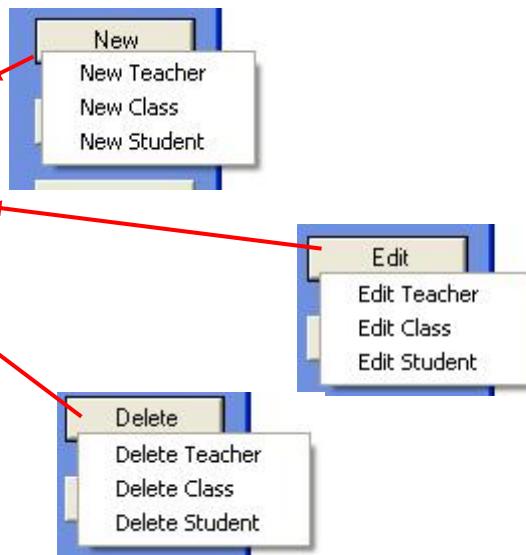
- After the first time setup
Select the prepared teacher and class name ◊ Generate the presentation ◊ Start the quiz. (*If the teacher does not select a class profile, the system will use the previously selected class.*)
 - (i) Profile – In the Profile dialogue box, the teacher can create, edit, and delete teacher, class and student information in the profile database.
 - (ii) Add New Teacher – Click **New** and select **New Teacher** to create a new Teacher and input relevant information:
 - Teacher First Name
 - Teacher Last Name

Click "Advance>>" to add more teacher information.

- Middle Name
- Salutation
- E-mail

Click "Add" to save the teacher information.

- o **New:** create a new teacher, class or student information, and then save it into the database.
- o **Edit:** edit existing teacher, class or student information.
- o **Delete:** delete teacher, student and class information from the database.
- o **Grouping:** form student group according to current selected class.
- o **Import:** import profiles from Comma separated values (*.txt) file format.
- o **Export:** export profiles into Comma separated values (*.txt) file format.



(iii) Add New Student – Click **New** and select **New Student** to create a new Student and input relevant information:

- o Student No.
- o Student First Name
- o Student Last name

Click "Advance>>" to add more student information.

- o Middle Name
- o Sex
- o Age
- o E-mail
- o Primary Phone No.
- o Secondary Phone No.
- o Comments

Click "Add" to save the student information.

(iv) Add New Class – Click **New** and select **New Class** to create a new Class, relate the Student to the Teacher and input relevant information.

- o Select a Teacher Name
- o Class Name
- o Subject

Click "Advance>>" to add more class information.

- o Grade
- o Comments

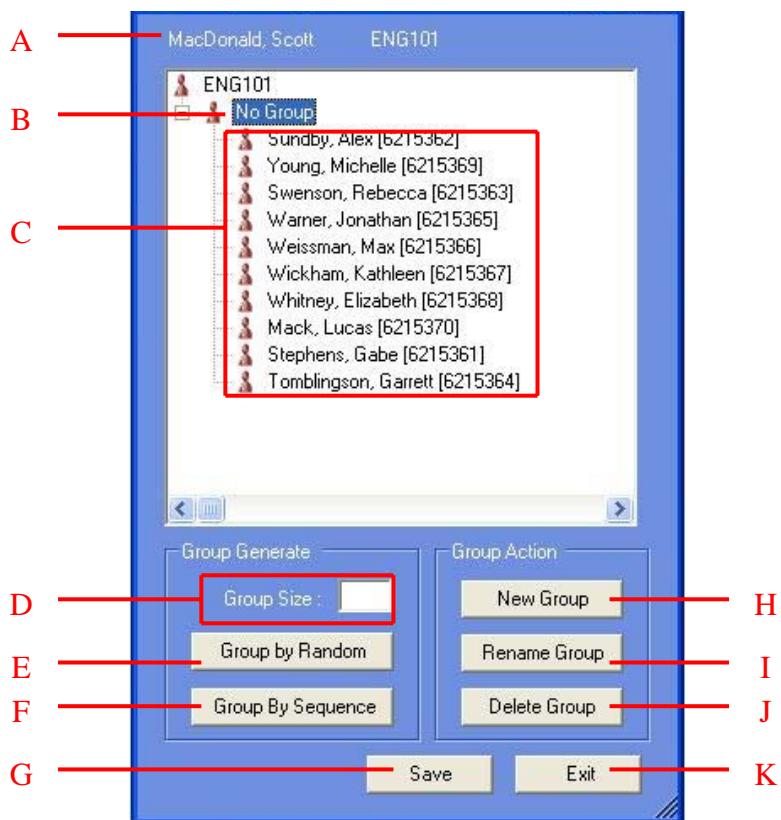
Click "Add" to save the class information. A Manage Class dialog will open. The table on the left will show students that you can add to the current

class. The table on the right shows all students belonging to the current class.

Both tables can be sorted by **Student No., First Name or Last Name**. You can click "Show All" to show all students not in the class in the left table. It is also possible to search by **Student No., First Name** and **Last Name**. Click "All>>" to add all students in the left table to the current class; click ">>" to add the selected student to the current class, click "<<" to remove the selected student from class or click "<<All" to remove all students from the current class. Click "OK" to finish.

- (v) Edit Teacher – Click the **Edit** Button and select **Edit Teacher** to edit the selected teacher information. All operations are similar to the **Add Teacher** function.
- (vi) Edit Student – Click the **Edit** button and select **Edit Student** to edit the selected student information. All operations are similar to the **Add Student** function.
- (vii) Edit Class – Click the **Edit** button and select **Edit Class** to edit the selected class information. Click "Update" to open a **Manage Class** dialog. All operations are similar to the **Add Class** function.
- (viii) Delete Teacher – Click the **Delete** button and select **Delete Teacher** to delete the selected teacher and the class records belonging to the teacher.
- (ix) Delete Student – Click the **Delete** button and select **Delete Student** to delete the student record **permanently**. Please note that the Update Class function is used to remove a student from a class.
- (x) Delete Class – Click the **Delete** button and select **Delete Class** to delete a class record.

(xi) Grouping –

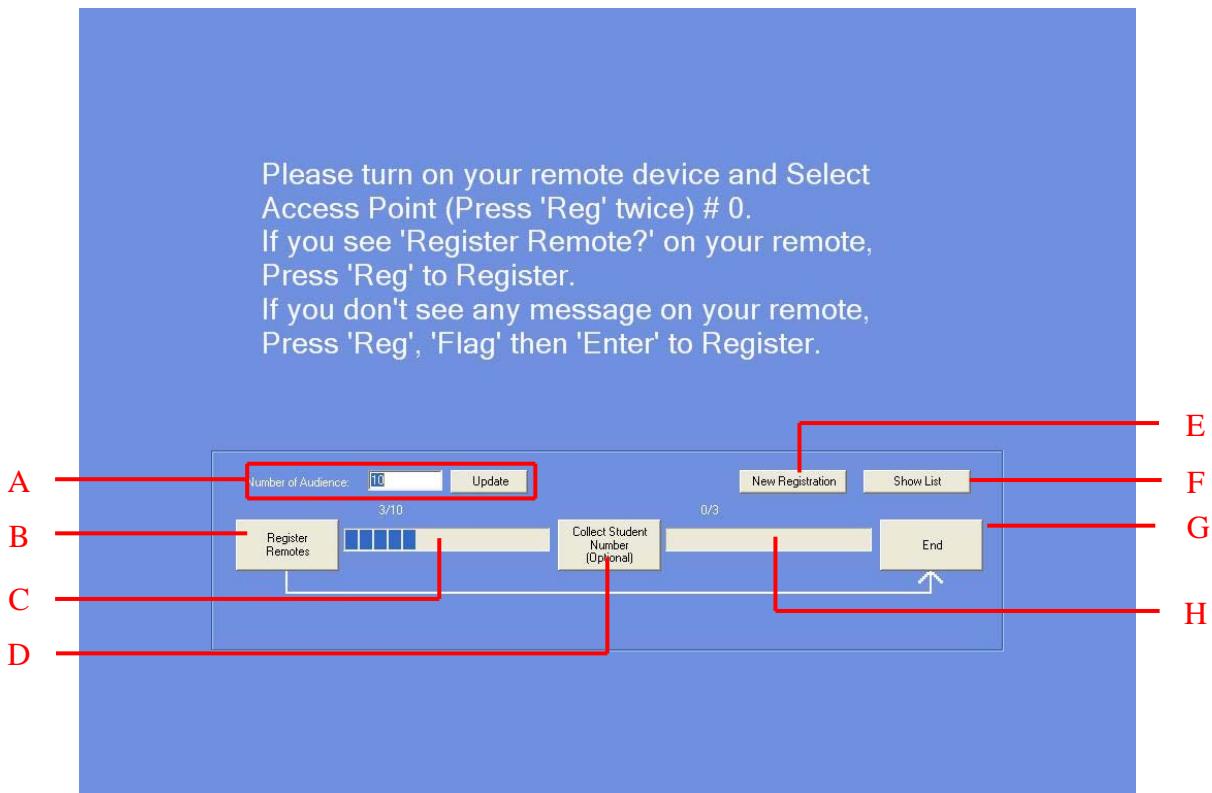


Label	Parts	Description
A	Teacher and Class	Managing Teacher and Class information
B	Group(s)	The name of group(s). Students without group are put in a default group called "No Group". Administrator can manage group by dragging and dropping students between groups.
C	Students	Students belonging to the group. The students' last name, first name and student number are shown.
D	Group Size	The default group size when generating groups by Random or by Sequence.
E	Group by Random	Group student randomly by the group size. Please note that all the previously defined groups will be removed after this operation.
F	Group by Sequence	Group student sequentially by the group size. Please note that all the previously defined groups will be removed after this operation.
G	Save	Save the grouping information.

H	New Group	Create a new empty group.
I	Rename Group	Rename the selected group.
J	Delete Group	Delete the selected group, all students under the selected group will be moved to the "No Group" group.

- (xii) Import – import profiles from a .txt file. Special data format is required, please see the appendix for reference
- (xiii) Export – export profiles to a .txt file
- (xiv) Select – Click the "Select" button to load the class profile into the system

Registration



Registration is required before the Presentation Quiz. Since the communication methodology of ARS System is based on Mac Address, all Mac Addresses associated with this machine must be registered first.

1. While the registration screen is being displayed, all remotes to be registered with this machine must be turned on and in the Access Point on screen (#0 in this case). The number of members in the audience during the registration can be adjusted.
2. To clear all previously registered remotes and start over, click **New Registration**.

3. Click **Register Remotes** to begin Mac Address registration. All remotes will receive a "Register Remote?" message on their displays. Press the "Reg" button on the remote to register to this machine. To register the remotes that do not receive this message, press "Reg", "i" and "Enter" to do a *self register*.

Note: All registered remotes are now able to operate with the machine. If a remote is registered to machine it cannot be registered again.

4. Click **Show List** to check if the remote is already registered. Please note that no two Mac Addresses can be the same.
5. To identify members of the audience that have registered by user ID, click **Collect Student Number (Optional)** (*Student Number is same as user ID in our case*). All registered remotes will display "User ID?" on the LCD screen.

*Note: A correct user ID that matches the record in the database must be entered, or it will not be recognized by the machine. **Collect Student Number (Optional)** can be clicked again in case any of the remotes times out. The Summary Report will show the students' quiz result if the student numbers are registered.*

6. **Register Remote** and **Collect Student Number (Optional)** can be done simultaneously. Click **End** to complete the registration.

Label	Parts	Description
A	Update number of Audience	Number of Audience refers to number of remotes allowed to register to this machine. It is generated by the selected profile of Profile.
B	Register Remotes	Click this button to broadcast a signal to all remotes in the same Access Point. "Register Remote?" will be displayed on remotes having received this signal. Press "Reg" button on the remote to register to the machine
C	Remote registration progress bar	Progress bar showing the status of remote registration
D	Collect Student Number (Optional)	Click this button to broadcast a signal to all registered remotes. "User ID?" will be displayed on remotes having received this signal. Key in the User ID and press "Enter" button to send the user ID to the machine
E	New Registration	Clear all registered remotes.
F	Show List	Show information of all registered remotes. A table with Remote Mac Address, Remote Virtual ID and User ID will be displayed.
G	End	End remote registration and exit.
H	Collect Student Number progress bar	Progress bar showing the status of User ID collection.

PowerPoint

This function is the Plug-in for Microsoft PowerPoint. The presenter can create questions in PowerPoint Slides and set the answers using "ARS Answer Editor" and quiz the audience. Before starting the PowerPoint, the number of members in the audience has to be indicated. Enter the "Profile". Select the profile and enter the "Registration" to complete the registration procedures.

ARS Answer Editor

Use the Answer Editor to set the name of the question in the current slide, multiple choice (MC) time limit, Buzz-In time limit, question types, question contents, answers and the associated score. Each slide can contain one question only. The question number in "Question Summary" corresponds to the slide number. Confirmation to replace the existing PowerPoint Slide will be displayed upon saving.

1. Click the **ARS Answer Editor** button on the PowerPoint tool bar.
2. Input the Question Summary (default is "Question #").
3. Input the Time Limit (default is 20 seconds).
4. Input the Score (default is 10).
5. Input the Difficulty (default is 1).
6. Input the Buzz-In time limit (default is 10 seconds).
7. Input the Wrong Answer Penalty (default is 0).
8. Input the Question
9. Select Collect answer mode: Select **Alphabet Input** for alphabet values or **Numeric Input** for numeric values. Check **Answer Sequence** for multiple, sequenced alphabet values, or the **Correct Answer/Answer Sequence** for multiple, sequenced numeric values.
10. Check **Real time update Report Chart** to display results collected in real-time during the presentation quiz. This option is not allowed if the answer is a sequence.
11. Check **Show Percentage** for display Report Chart in terms of percentage.
12. If **Show Percentage** is checked, Check **Count No Reply** for showing the statistic includes no reply audience in the Report Chart.
13. **Answer Edit -/+** to decrease or increase the number of answer choices.
14. Check the **Correct Answer** check box for the correct answer and input the answer. It is possible to have more than one correct answer.
15. Click the **X** button at the end of a choice to delete that choice row.

ARS Insert Template

Insert a PowerPoint Presentation Slide template for ARS. A template report chart will be created with the slide. The slide objects can be adjusted.

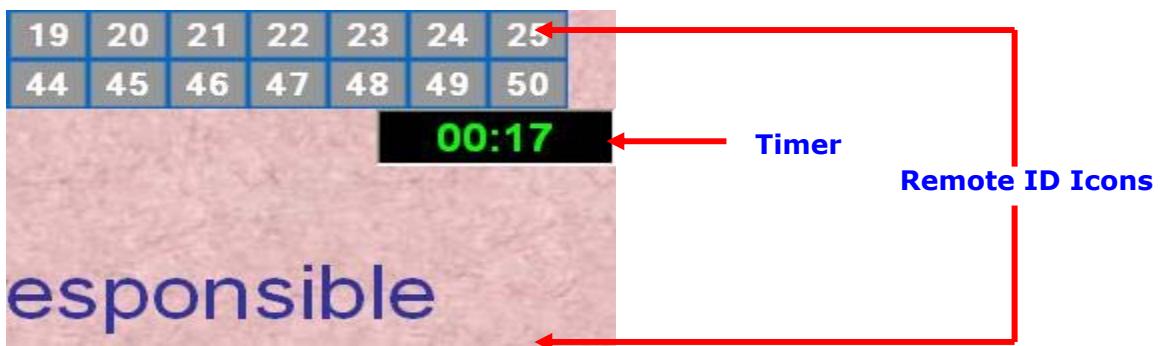
ARS Analyze Data

Analyze the slide and try to generate the result in ARS Answer Editor.

Example: Quiz

1. Start quiz

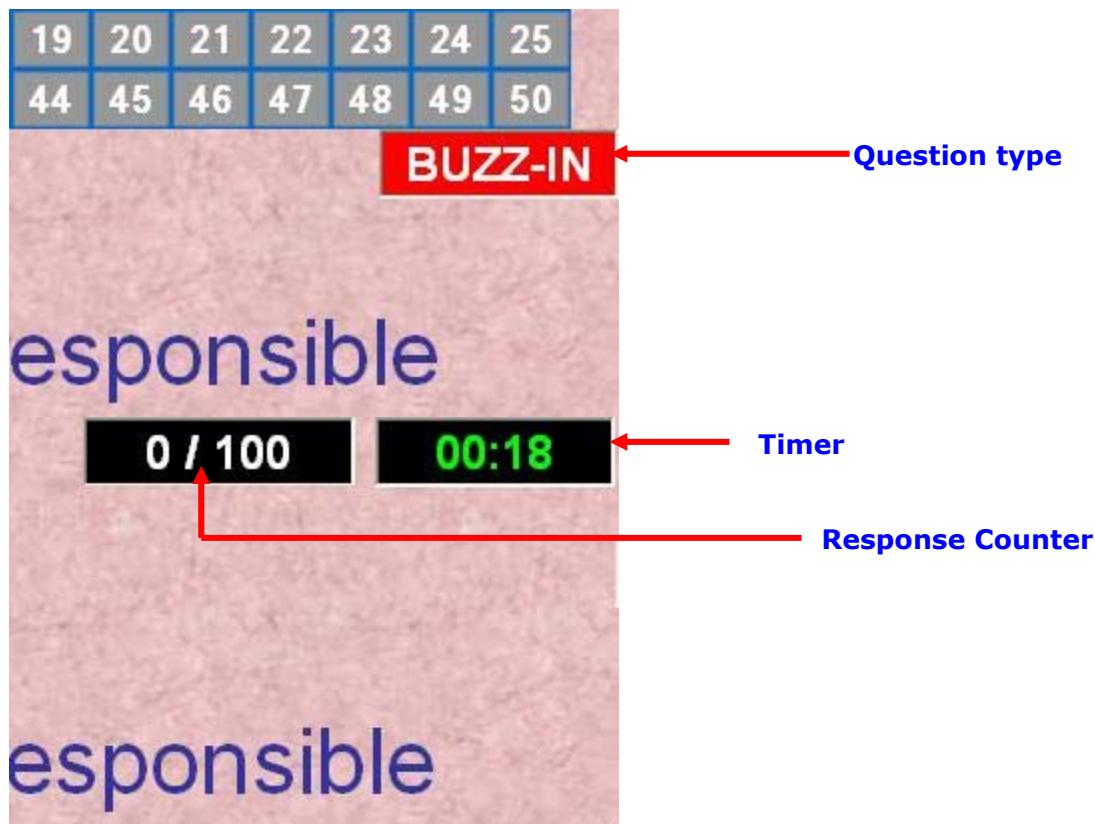
- i. Press "F5" on the keyboard or "Full Screen" on the teacher's remote to start the PowerPoint Slide Show. Move to the appropriate slide to start the quiz.
- ii. Use "Buzz In" button to define the question type - Multiple Choice (default) or Buzz In.
- iii. Press the "Start" button on the teacher's remote. The Remote ID Icons/Response Counter, question type and remaining time will be shown on screen.
- iv. Students may press answer button(s) on their remotes to answer the multiple choice (MC) questions within the time limit. For Buzz-In question, students have to press "Buzz-In" button within the time limit (default: 10 seconds). The successful student must answer the question within the "Buzz-In time limit" (default: 10 seconds).



2. Use the function buttons on the teacher's remote to control the quiz operation.

- ☞ Press **Start** to start the quiz.
- ☞ Press **Stop** button to stop answering each question and press **Result** button to display the results and statistics (In Buzz-In mode & multiple answer mode, this button is disabled).
- ☞ Press **Prev** or **Next** button to skip backward or forward
- ☞ Press **Report** button to view the accumulative result of quiz report on screen.
- ☞ Press **FullScreen** button to switch between slide show and question edit mode in PowerPoint

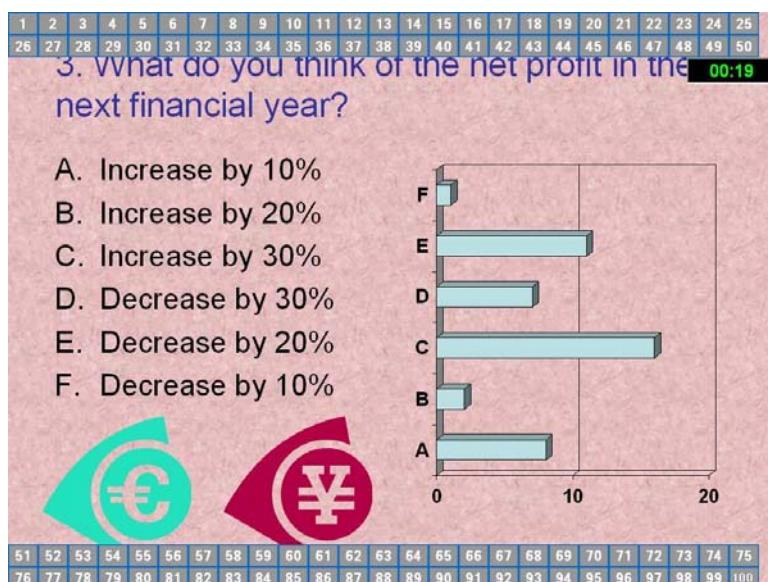
3. As the last question is answered, press the **FullScreen** button twice to end the quiz; the results can be saved into the database by pressing **Enter**.



Results

Press the **Result** button on the teacher's remote control to display the students' answers, results and statistics.

The following is a sample result output with a 100-student class.

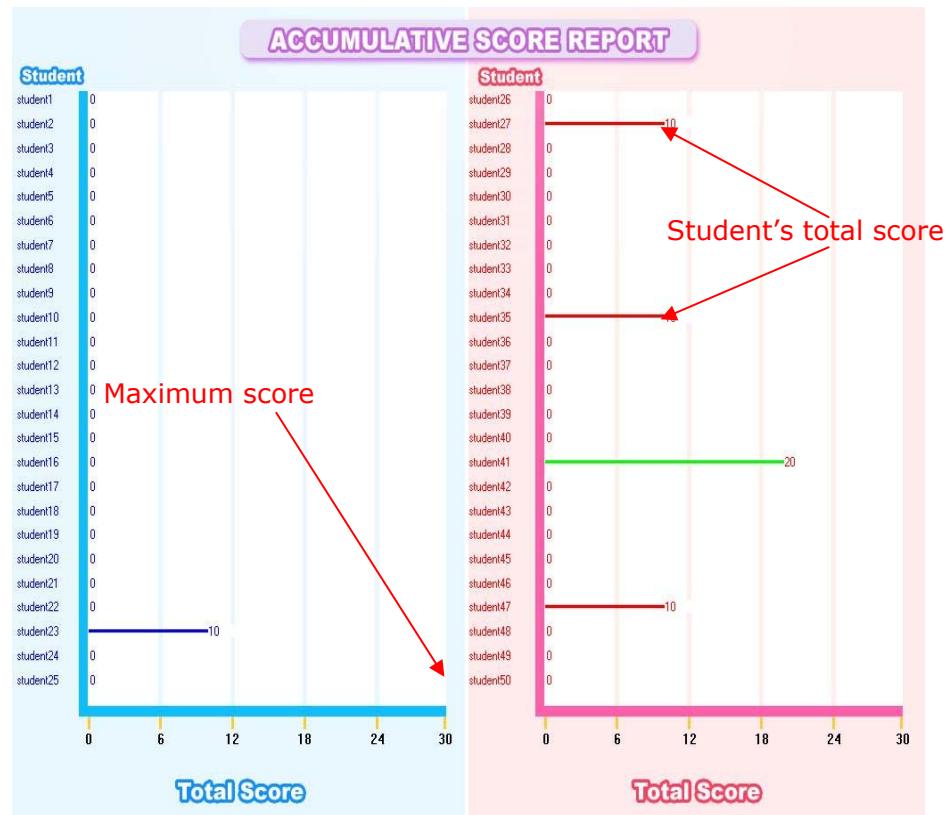


Report

Quiz reports are summarized in a well-formatted manner. The system can generate two different report formats:

(i) Graphical Report

This report shows the students' names and their total scores. It provides a real time statistic on student progress and saves teacher workload in grading.



(ii) Graphical report for the top 10 students

This graphical report displays the total score of the top 10 students.



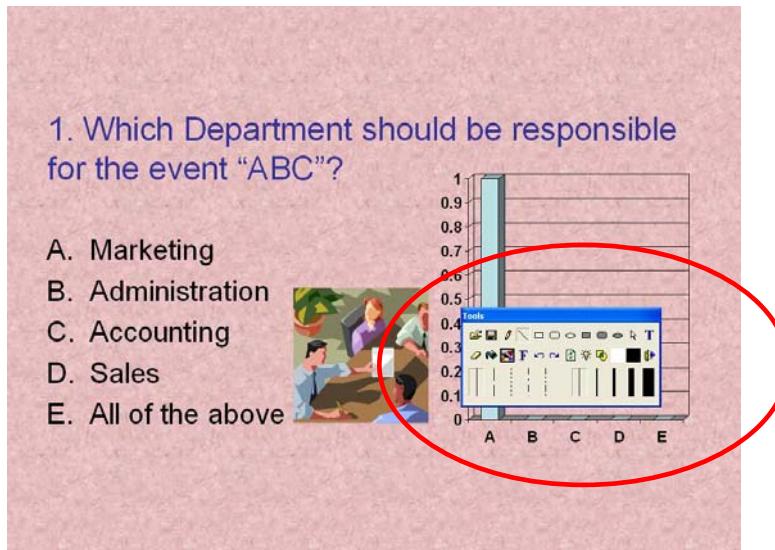
Instructor can press left-arrow and right-arrow to switch between pages in Report.

This example of a quiz can be extended in a likewise manner to function as votes or attendance-taking.

White Board

The Smart Pen is a marker tool. It provides items for drawing, typing, editing, deleting and some useful items for presentation.

Press Ctrl + W on the keyboard, a whiteboard menu will be shown.



Hints for using whiteboard:

- ω Click  to open an existing drawing.
- ω Click  to save the drawing outcomes.
- ω Click  to erase the unwanted traces.
- ω Click  to undo or  redo the last change.
- ω Click  to remove all traces on the current screen.
- ω Click  to change the text font, font size, and font style.
- ω Click  to type text.
- ω Click  to get the blackboard.
- ω Click  to get the whiteboard.
- ω Left click another color on the palette for foreground color change.
- ω Right click another color on the palette for background color change.
- ω Tick  check box for transparent effect on the traces.
- ω Tick  check box to blink the next trace.
- ω Click  to exit the Smart Pen Tool.

Report

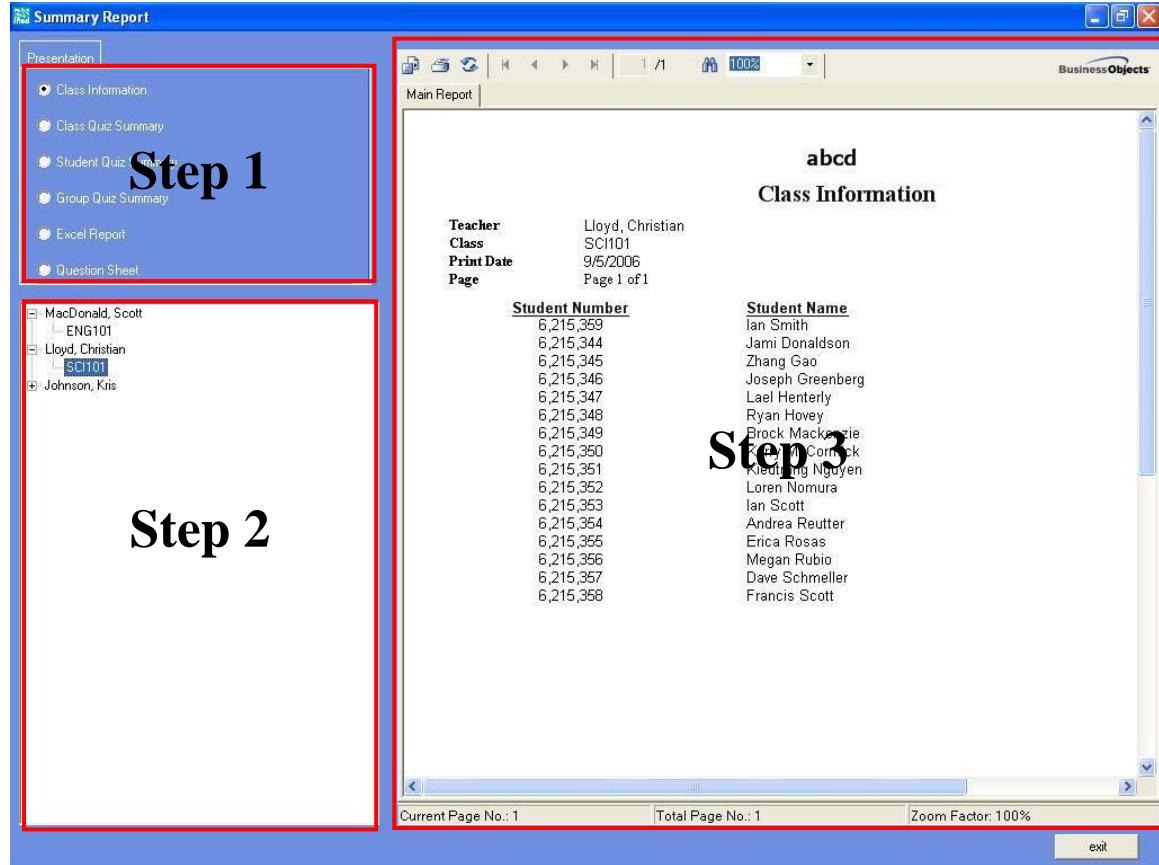
Click "Report" in system tray icon menu to open the following dialog.

To preview the report,

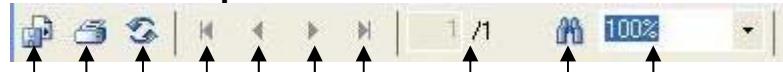
Step 1: select type of report

Step 2: select presenter's name and corresponding section

Step 3: preview the report



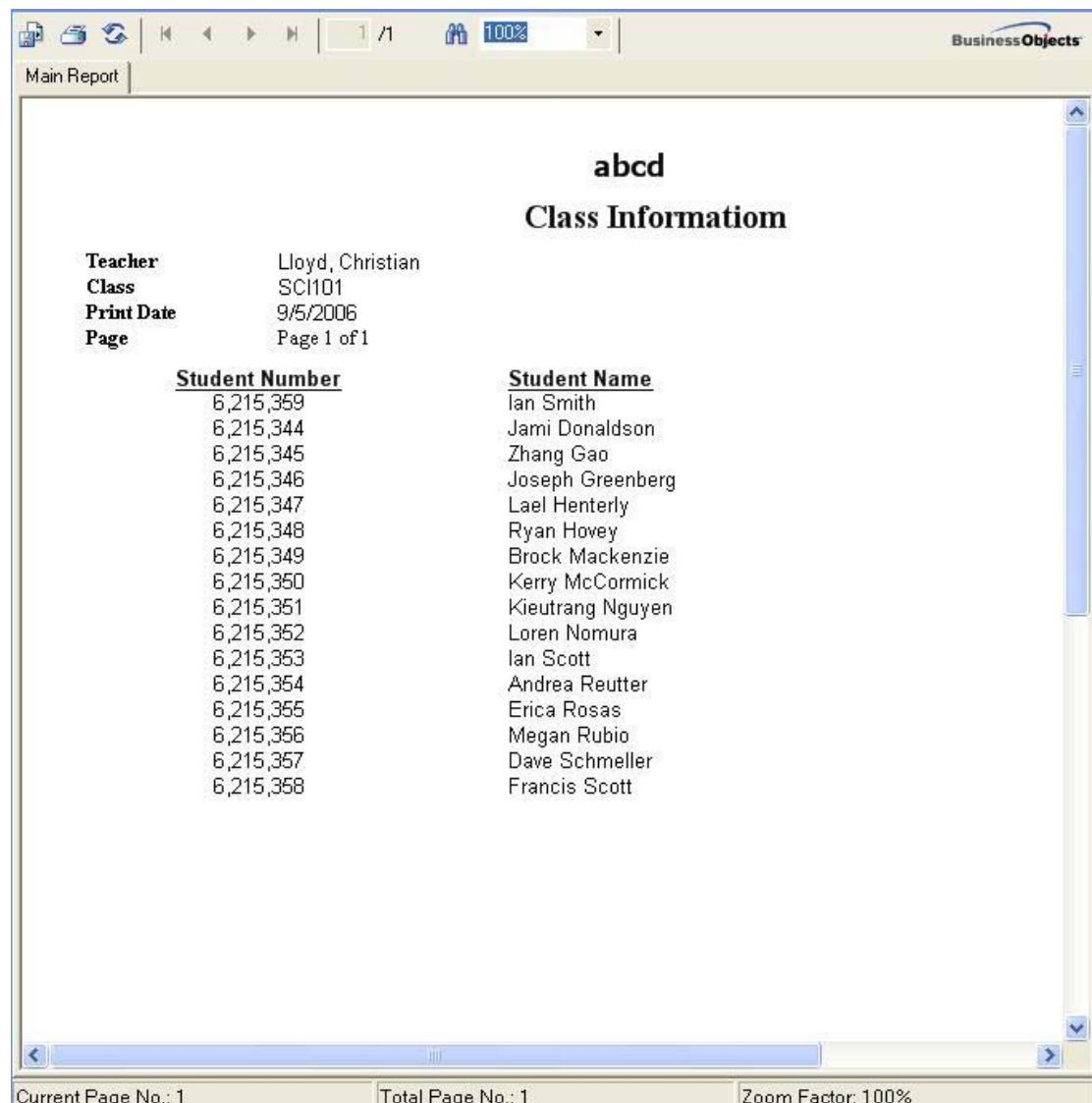
Tools of Print preview



- i.) Export Report (Save).
- ii.) Print Report
- iii.) Refresh Report
- iv.) First Page
- v.) Previous Page
- vi.) Next Page
- vii.) Last Page
- viii.) Current Page
- ix.) Find Text
- x.) Zoom

Class information

Shows the User ID (Student Number) and its corresponding Student Name in the class that is selected.



The screenshot shows a BusinessObjects report window. The title bar includes standard icons for file operations, a page number (1/1), a magnifying glass, a zoom factor (100%), and the BusinessObjects logo. The main report area is titled "abcd Class Information". It displays student data in two columns: "Student Number" and "Student Name". The "Student Number" column lists 20 student IDs, and the "Student Name" column lists the corresponding student names. At the bottom of the report, there are navigation buttons for first, previous, next, and last pages, along with current and total page numbers (1/1) and a zoom factor of 100%.

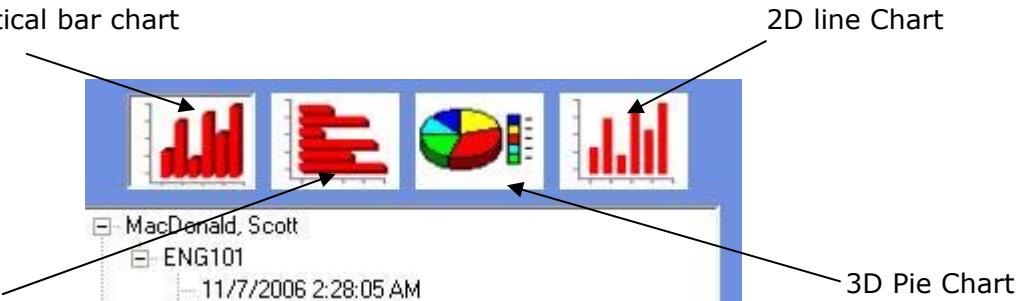
Student Number	Student Name
6,215,359	Ian Smith
6,215,344	Jami Donaldson
6,215,345	Zhang Gao
6,215,346	Joseph Greenberg
6,215,347	Lael Henterly
6,215,348	Ryan Howey
6,215,349	Brock Mackenzie
6,215,350	Kerry McCormick
6,215,351	Kieutrang Nguyen
6,215,352	Loren Nomura
6,215,353	Ian Scott
6,215,354	Andrea Reutter
6,215,355	Erica Rosas
6,215,356	Megan Rubio
6,215,357	Dave Schmeller
6,215,358	Francis Scott

NOTE: All reports will contain the organization name and logo if the information is entered at the "System Setting" from "Setup".

Class Quiz Summary

Four different types of graph are available, including 3D vertical bar chart, 3D horizontal bar chart, 3D Pie chart and 2D line chart, to represent all the students' cumulative score. Under the graph, the students' answers and total score by each student are shown.

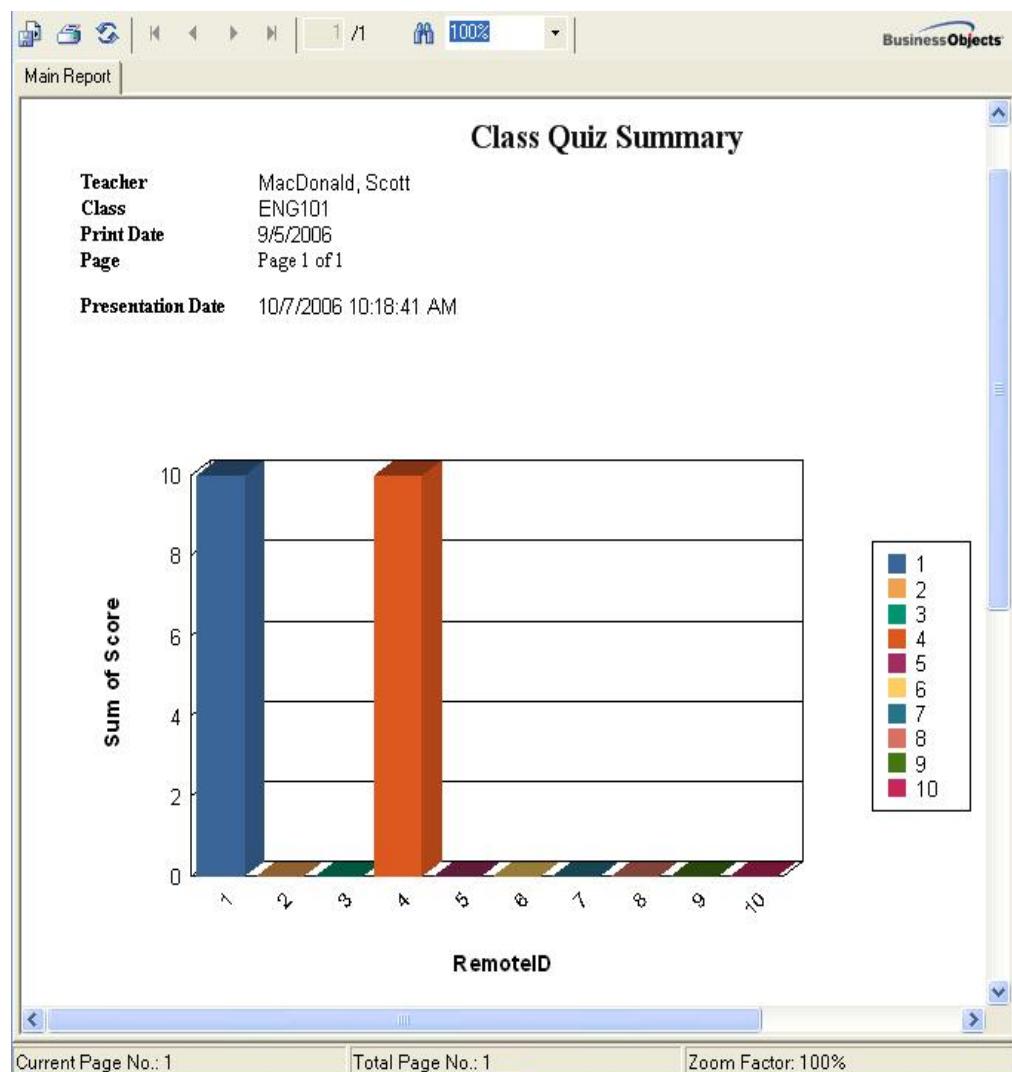
3D vertical bar chart



2D line Chart

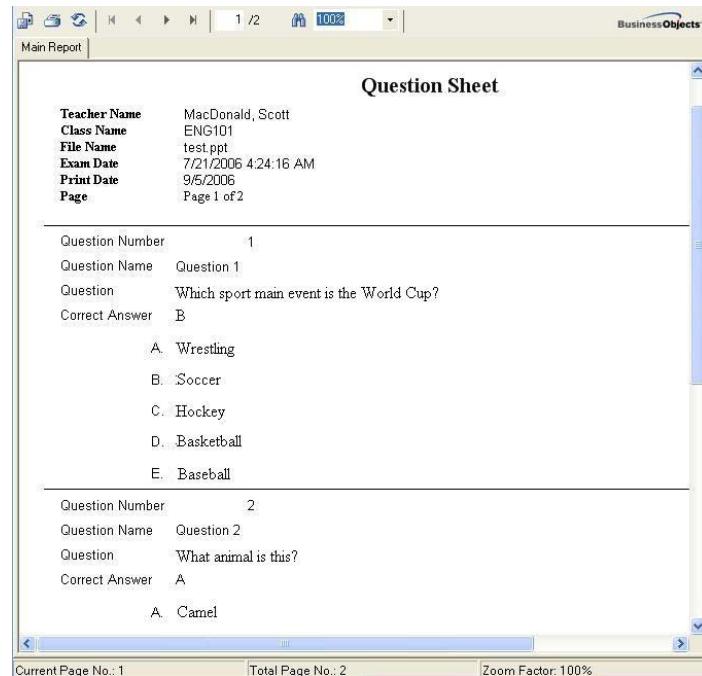
3D Pie Chart

3D horizontal bar chart



Question Sheet

It shows the question contents entered in "ARS Answer Editor"



The screenshot shows a BusinessObjects report titled "Question Sheet". The report header includes the following information:

Teacher Name	MacDonald, Scott
Class Name	ENG101
File Name	test.ppt
Exam Date	7/21/2006 4:24:16 AM
Print Date	9/5/2006
Page	Page 1 of 2

Below this, the first question is listed:

Question Number	1
Question Name	Question 1
Question	Which sport main event is the World Cup?
Correct Answer	B

The correct answer B is followed by five options:

- A. Wrestling
- B. Soccer
- C. Hockey
- D. Basketball
- E. Baseball

Below this, the second question is listed:

Question Number	2
Question Name	Question 2
Question	What animal is this?
Correct Answer	A

The correct answer A is followed by one option:

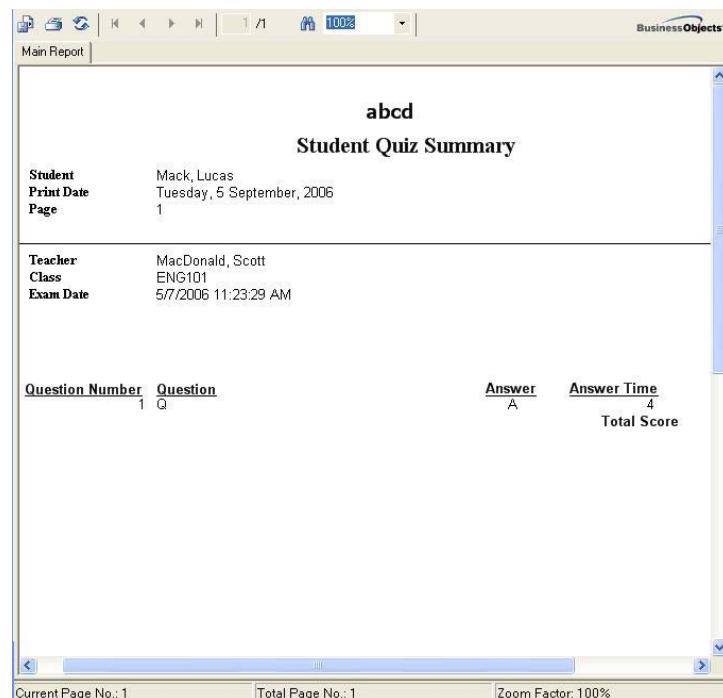
- A. Camel

At the bottom of the report, the following information is displayed:

Current Page No.: 1 Total Page No.: 2 Zoom Factor: 100%

Student Quiz Summary

Select a particular Student Number/Remote ID. A report is displayed containing the questions answered, answer, answer time, scores from each question and the total score.



The screenshot shows a BusinessObjects report titled "abcd Student Quiz Summary". The report header includes the following information:

Student	Mack, Lucas
Print Date	Tuesday, 5 September, 2006
Page	1

Below this, the teacher information is listed:

Teacher	MacDonald, Scott
Class	ENG101
Exam Date	5/7/2006 11:23:29 AM

At the bottom of the report, the following information is displayed:

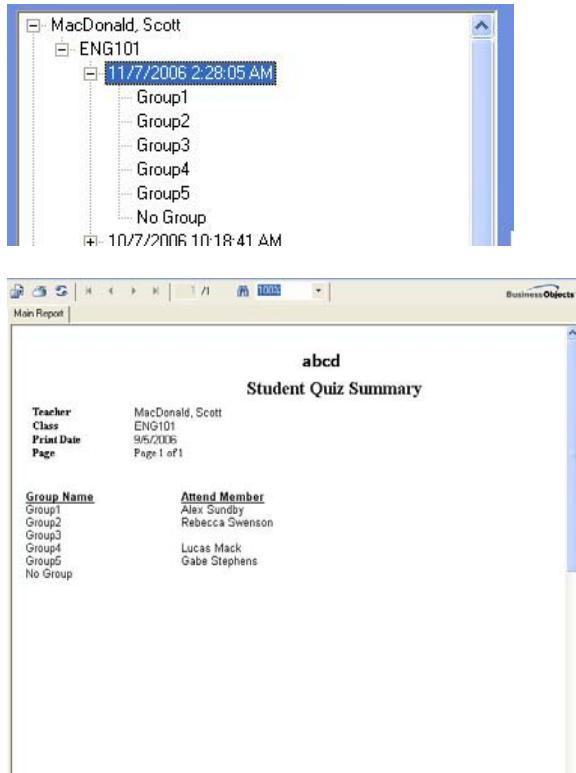
Question Number	Question	Answer	Answer Time
1	Q	A	4
Total Score			

At the bottom of the report, the following information is displayed:

Current Page No.: 1 Total Page No.: 1 Zoom Factor: 100%

Group Quiz Summary

Group Quiz Summary shows cumulative scores of student groups. Select the date to display the overall performance of the group.



The screenshot shows a BusinessObjects interface. At the top, there is a tree view with the following structure:

- MacDonald, Scott
 - ENG101
 - 11/7/2006 2:28:05 AM
 - Group1
 - Group2
 - Group3
 - Group4
 - Group5
 - No Group
 - 10/7/2006 10:18:41 AM

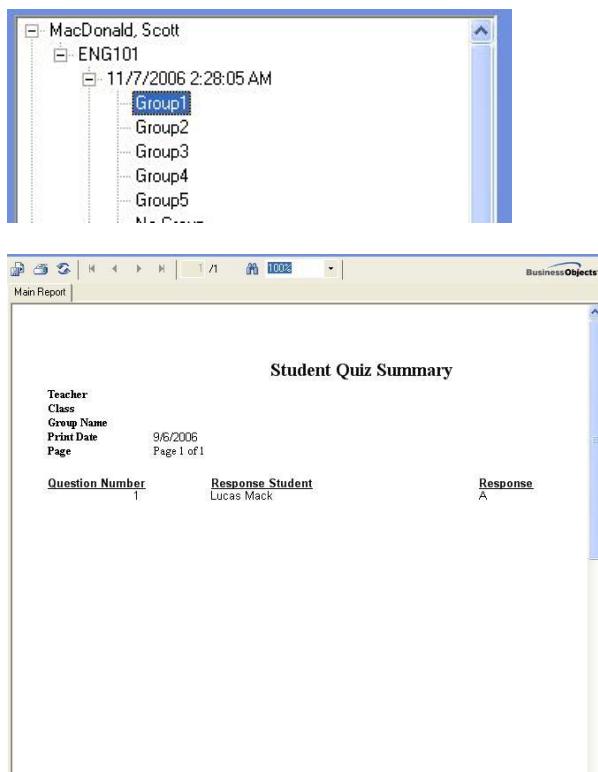
Below the tree view is a report window titled "abcd Student Quiz Summary". The report header includes:

Teacher: MacDonald, Scott
Class: ENG101
Print Date: 9/5/2006
Page: Page 1 of 1

The report body displays a table of student attendance:

Group Name	Attend Member
Group1	Alex Sundby
Group2	Rebecca Swenson
Group3	
Group4	Lucas Mack
Group5	Gabe Stephens
No Group	

Select "Group Name" to display the answers of each student in the group for each question.



The screenshot shows a BusinessObjects interface. At the top, there is a tree view with the following structure:

- MacDonald, Scott
 - ENG101
 - 11/7/2006 2:28:05 AM
 - Group1
 - Group2
 - Group3
 - Group4
 - Group5
 - No Group

Below the tree view is a report window titled "Student Quiz Summary". The report header includes:

Teacher: MacDonald, Scott
Class: ENG101
Group Name: Group1
Print Date: 9/6/2006
Page: Page 1 of 1

The report body displays a table of student responses:

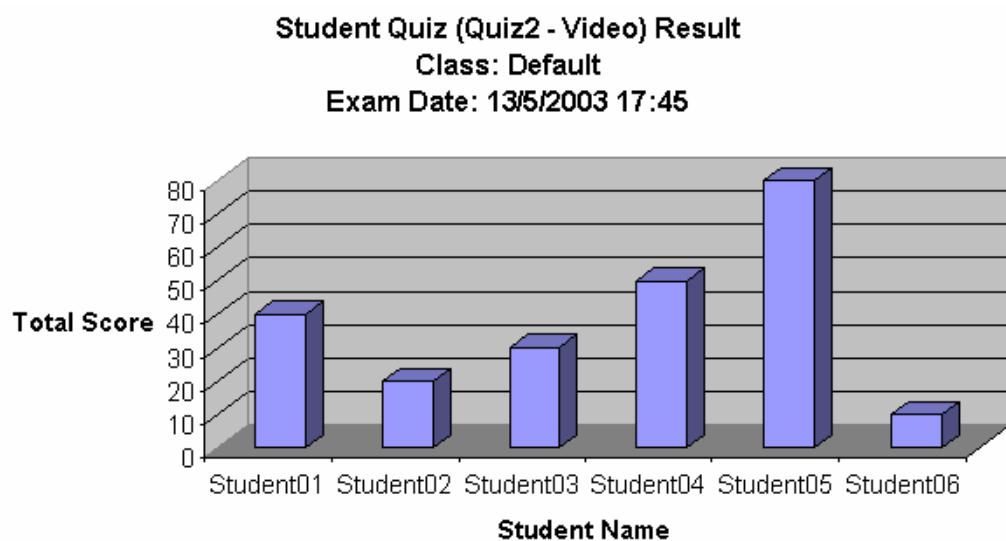
Question Number	Response Student	Response
1	Lucas Mack	A

Excel Report

This report shows the overall performance of a class. It contains the total number of students who took the quiz and their scores. Each student's performance is represented by what they had chosen for each question and whether or not they are correct. The report is generated into .txt format, and can be opened by Microsoft Excel. It saves time and paper for preparing the reports and statistics.

	A	B	C	D	E	F	G	H	I
1	Exam Date	10/7/2006 0:00							
2	Teacher Name	MacDonald, Scott							
3	Class Name	ENG101							
4									
5	Question Title	Question 1							
6									
7	Question Type	Single Alphabet							
8									
9	Remote ID	Student	Answer	Score					
10	1	Lucas Mack	A	10					
11	2	Rebecca Swei	B	0					
12	3	Alex Sundby		0					
13	4	Gabe Stephen	A	10					
14	5			0					
15	6			0					
16	7			0					
17	8			0					
18	9			0					
19	10			0					
20									
21									
22									
23									
24									
25									
26									
27									
28									
29									
30									
31									
32									
33									
34									
35									

The following is a TXT Result Report template:



6 Troubleshooting Guidelines

Read the list below to find the item that best describes your problem, and check the remedy. If the problem persists, please contact your support team for technical assistance.

Problem	Remedial Action
No display on remote LCD	<ol style="list-style-type: none"> 1. Remove the remote control's battery cover and verify that the batteries are correctly installed. 2. Verify that the batteries are fully charged using a voltage tester; and replace with a new one if necessary. 3. If steps 1 and 2 do not address the problem, please contact your distributor
Remote LCD display keeps turning off and no "ARS" message	<ol style="list-style-type: none"> 1. The batteries are running low and need to be replaced. 2. Place the batteries in the remote according to the polarity markings ("+" and "-").
No response to signals from teacher and student remotes	<ol style="list-style-type: none"> 1. Make sure that only one of PowerPoint, Registration, Setup and About windows are open at a time. 2. Check that the receiver and remotes are assigned the same access point #. 3. Verify that the USB cable is connected securely and working. 4. Check the device manager for CP210x USB to UART Bridge Controller under the Ports (COM & LPT). If it doesn't exist, please make sure the USB device driver is installed. COM Port # must between 1 and 9.
Cannot switch to Buzz-In mode in PowerPoint	Ensure that question has been assigned a correct answer in "Answer Editor".
No response to remote control signal in PowerPoint	Check to see if any other applications that use virtual COM port are running (including the Setup, About and Registration of ARS system).
ARS cannot be installed	Make sure .Net Framework 1.1 is installed. A screen resolution of 1024 x 768 is recommended.

7 Technical Specifications

Receiver	Dimensions	64mm(W) x 78mm(L) x 22mm(H) (exclude the antenna)
	Power	Provided by computer USB port
	LED	2 LED: Power LED, Active LED
	Antenna	External antenna
	RF Signal Receiving Angle Receiving Distance	RF receiving angle 360° Maximum 100 meters in an open area
	USB cable	USB 1.0 or 2.0; USB port to mini B Cable
Instructor Remote	Dimensions	122mm(W) x 68mm(L) x 21mm(H)
	Key Buttons	12
	Battery Requirement	Battery Size "AA" 1.5 volt x 2
	LCD	128 x 32 pixels display
	RF Signal	Maximum 100 meters of transmission distance
	Sleeping Saving Mode Current	Enter Power Sleeping Mode within 10 minutes when the remote is left idle < 90 µA
	Operation Mode Current	< 16 mA
	RF Frequency	2410M-2481MHz
	Output Signal Current	< 16 mA
Audience Remote	Features	Low Battery Detection; Memory Buffer Storage; Watchdog Timer Reset
	Dimensions	122mm(W) x 68mm(L) x 21mm(H)
	Key Buttons	20
	Battery Requirement	Battery Size "AA" 1.5 volt x 2
	LCD	128 x 32 pixels display
	RF Signal	Maximum 100 meters of transmission distance
	Sleeping Saving Mode Current	Enter Power Sleeping Mode within 10 minutes when the remote is left idle < 90 µA
	Operation Mode Current	< 16 mA
	RF Frequency	2410M-2481MHz
	Output Signal Current	< 16 mA
	Features	Low Battery Detection; Memory Buffer Storage

Design and specifications are subject to change without prior notice.

Audience Remote Response Time

Response time is proportional to the number of members in the audience in the System.

No. of members in the audience	Time required to completely receive the signals
100	0.1 second
500	0.5 second
1000	1 second
3000	4 seconds

Notes

- ♣ The batteries should be removed from the remotes if they are not to be used for long time.
- ♣ The communication range will decrease if batteries are low.
- ♣ In case of unsatisfactory signal reception and transmission, please check whether the batteries low.
- ♣ Design and specifications are subject to change without prior notice.

PATENTS PENDING (For all product design, hardware and software technology used)

8 FAQ

1. Which version of Microsoft Office is supported by ARS system?

Microsoft Office 2000 and up

2. Which operating system is supported by ARS system?

Windows 2000/XP/2003

3. What language version does ARS have?

ARS currently has an English version.

4. I installed a language other than English on my windows, but it cannot display the text properly.

If you are using Microsoft Windows XP, click the Regional and Language Options in Control Panel. Then setup the language you want to display in the Advanced tab. If you are using Microsoft Windows 2000, go to the Regional and Language Options and install the language (the Windows installation CD is required). English is the recommended language.

5. How can I get my saved data after I saved a PowerPoint Presentation?

ARS system saves the data into a database. These data can be exported or saved by opening Report Summary. Different formats, such as PDF, RPT, Microsoft Excel, Microsoft Word and Text, are possible.

Appendix I Profile File Format

Profiles can be imported from and exported to a .txt file. The file format is specially designed and the details are as follows:

1. One .txt file can contain many profiles for different presenters.
2. Row 1 column A of each *sheet* MUST be the text "ARS System". Otherwise, the data will be ignored.
3. Row 2 contains the class information header
4. Row 3 contains the class information according to the headers
5. Row 4 contains the teacher information header
6. Row 5 contains the teacher information according to the headers
7. Row 6 contains the student information header
8. From Row 7 onwards, the rows contain the student information, each row representing one student record
9. If there is more than one class in the file, the class information continues after the student records of the previous class.

Here is a sample class profile opened with Microsoft Excel:

	A	B	C	D	E	F
1	ARS System					
2	Class	Subject	Grade	Comments		
3	MAT202	Mathematics				
4	Teacher First Name	Teacher Last Name	Middle Name	Salutation	Email	
5	Kris	Johnson				
6	Student Number	First Name	Last Name	Middle Name	Gender	Age
7	6215331	Lindsay	Aaselund		Male	0
8	6215332	Kathy	Anderson		Male	0
9	6215333	Stephanie	Anderson		Male	0
10	6215334	Arlana	Angel		Male	0
11	6215335	Rebecca	Brinson		Male	0
12	6215336	Mary	Brooks		Male	0
13	6215337	Darryl	Brown		Male	0
14	6215338	Sandi	Bruington		Male	0
15	6215339	Michael	Burtis		Male	0
16	6215340	Kelvin	Byers		Male	0
17	6215341	Lim	Kevin		Male	0
18	6215342	Helen	DeBarge		Male	0
19	6215343	Maryssa	Dillon		Male	0
20	Class	Subject	Grade	Comments		
21					

ARS Instruction Manual

Open the file in a notepad program and it looks like this:

```
ARS System
Class,Subject,Grade,Comments
"MAT202","Mathematics","",""
Teacher First Name,Teacher Last Name,Middle Name,Salutation,Email
"Kris","Johnson","",""
Student Number,First Name,Last Name,Middle
Name,Gender,Age,Phone1,Phone2,Email,Comments,Income
"6215331","Lindsay","Aaselund","","Male","0","","","",""
"6215332","Kathy","Anderson","","Male","0","","","",""
"6215333","Stephanie","Anderson","","Male","0","","","",""
"6215334","Arlana","Angel","","Male","0","","","",""
"6215335","Rebecca","Brinson","","Male","0","","","",""
"6215336","Mary","Brooks","","Male","0","","","",""
"6215337","Darryl","Brown","","Male","0","","","",""
"6215338","Sandi","Bruington","","Male","0","","","",""
"6215339","Michael","Burtis","","Male","0","","","",""
"6215340","Kelvin","Byers","","Male","0","","","",""
"6215341","Lim","Kevin","","Male","0","","","",""
"6215342","Helen","DeBarge","","Male","0","","","",""
"6215343","Maryssa","Dillon","","Male","0","","","",""
Class,Subject,Grade,Comments
```

- END -

FCC Statement:

- 1) This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
 - (1) This device may not cause harmful interference, and
 - (2) This device must accept any interference received, including interference that may cause undesired operation.
- 2) Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.