Scoring & Timing Solution for Archery
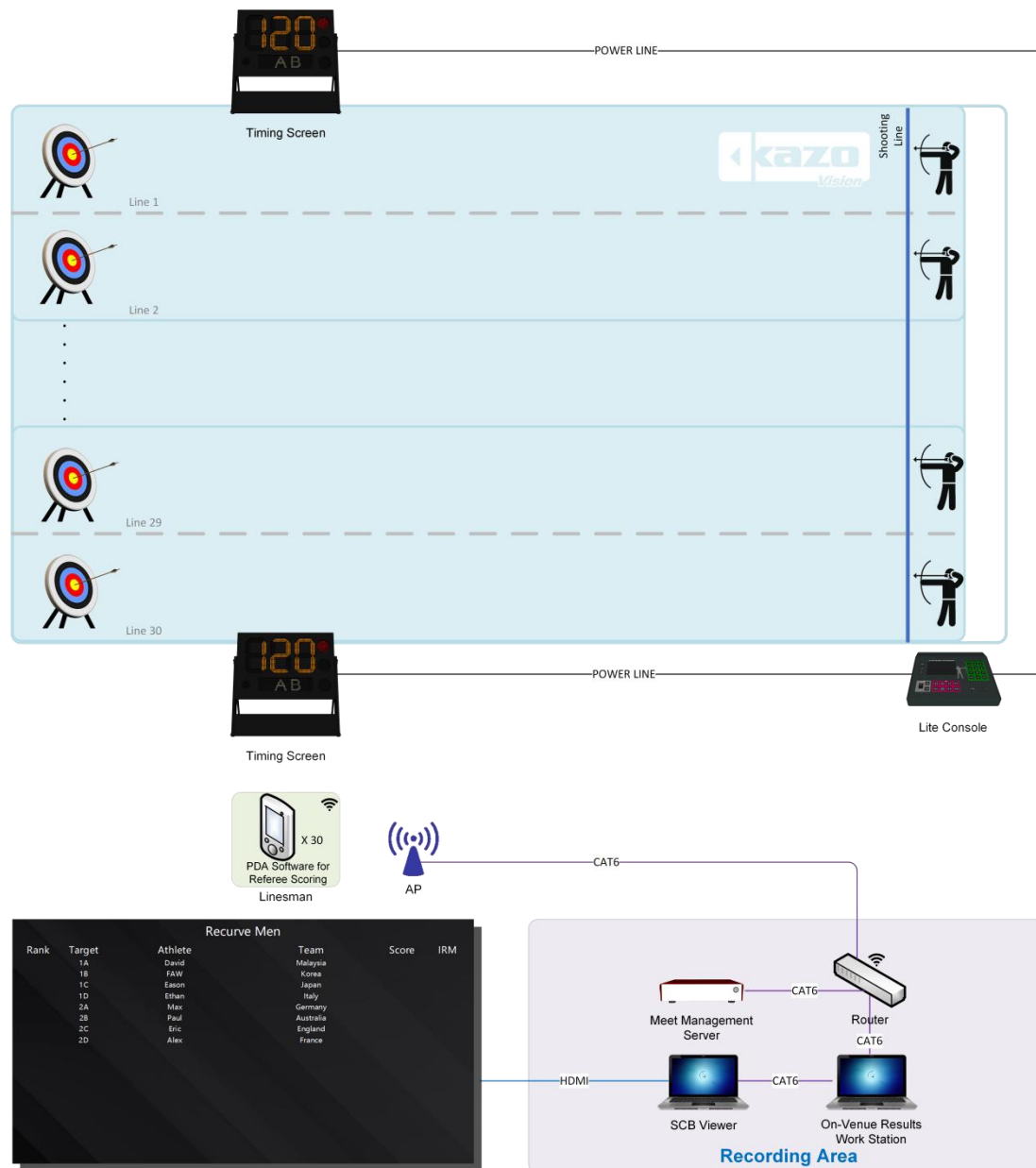
1. Introduction

This is a general solution for LED display in archery stadium which has the functions of timing, scoring, displaying advertisement, notification, the information of referees and teams. It is an ideal choice for most of stadiums.
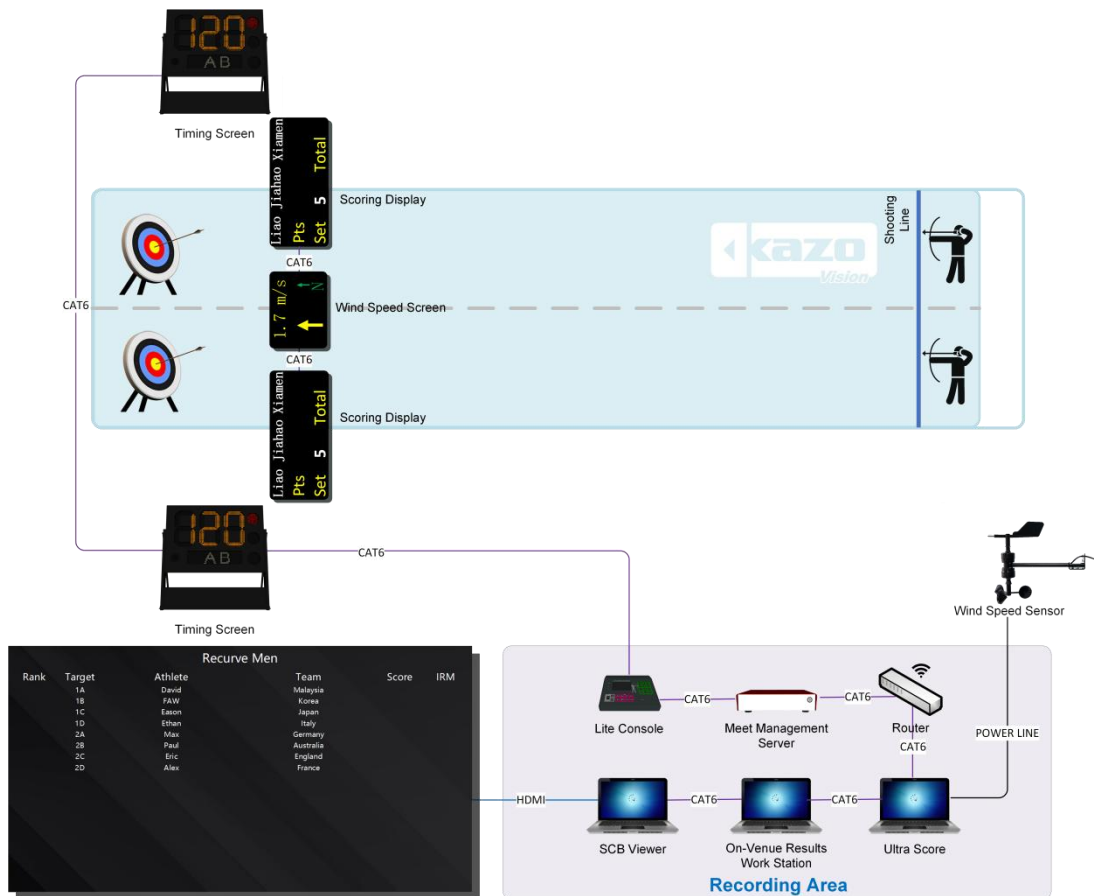
1.1 System Introduction

1.1.1 System Chart for Qualifying

1.1.2   System Chart for Knockout

System Description

1) **LAN:** A LAN is set up in the stadium. Connect the LED control PC, Ultra Score Terminal PC, Scoring & Timing Host, Referee Score Terminal, Meet Management Server, On-Venue Results Workstation and Printer to the LAN.

2) **LED Screen:** One or two LED screens are controlled by separate computers which connect with LED sending cards. Both of the LED screens can show the same contents or different contents as required.

3) **Match Scoring & Timing Host:** It is the core scoring & timing equipment which is installed in the Officials Table and has the function of hot backup.

4) **Referee Scoring & Timing Terminal:** Installed in the Officials Table for referee's operation of score. It can be connected to the LAN through network cable or WIFI.

5) **Meet Management Server:** It is the core data processing equipment which is installed in the Technical Table and connected to the LAN by network cable.

6) **Archery Timing Screen:** Connected with Match Scoring & Timing Host to display match timing and information of players and teams.

7) **Archery Mini Timing Screen:** Connected with archery timing screen to display match status and timing.

1.2 Functions

Event arrangement

- One key to import and to input the players' information are both available.
- To draw lots.
- To generate, export and print the bracket.
- To generate, export and print the order form.

Scoring & timing operation

- Supported match rules includes: Individual qualifying, Individual knockout, Team knockout, and Combination match.
- To display countdown in a real time.
- To manage the match states.
- To manage the match round.
- To make a point.

Results treatment

- Quick printing and exporting the result form.
- Quick printing and exporting player rankings list.
- Quick printing and exporting the form of referee operations.
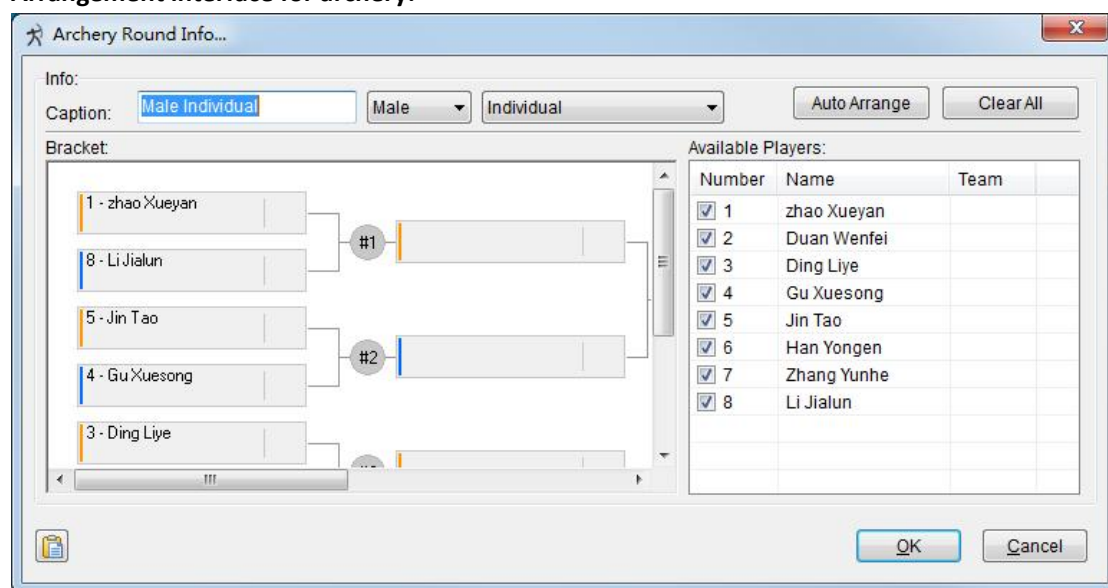
System advantages

- Information will be saved automatically in case of power out and other emergency situations.
- Providing free software upgrading service in lifetime.

2. Match Scoring System

2.1 Ultra Score Software

Products	Details
Standalone edition	◆ Installed on one PC. ◆ Supports: Archery ◆ English version ◆ Including 1 dongle

Arrangement interface for archery:

Scoring and timing display for archery:

2.2 Score Display Software

Products	Detail
Score Display Software	Type: SCB VIEWER Support: Archery Functions: ◆ Layout of scoreboard can meet international game rules. ◆ All contents on the scoreboard including fonts, color and layout can be modified to meet clients' needs. ◆ Used for displaying player information, score and bureau score of a single court. ◆ Used for displaying player information, score and bureau score of multiple sites. ◆ The summary display screen can automatically adjust the display layout according to the competition process. ◆ The picture is updated in real time according to the referee's operation. ◆ Automatic data backup. In case of computer failure or power failure, the previous screen will be restored after restart.

Recurve Men

Rank	Target	Athlete	Team	Score	IRM
	1A	David	Malaysia		
	1B	FAW	Korea		
	1C	Eason	Japan		
	1D	Ethan	Italy		
	2A	Max	Germany		
	2B	Paul	Australia		
	2C	Eric	England		
	2D	Alex	France		

2.3 Lite Console

Item	Details
Lite Console	Type: KS-GC15-AR Size: 265x220x100(mm) Used with the Ultra score software Communication: USB, RS485 With 4.3" color LCD screen Material: Iron + Plastic Support: Archery ◆ Functions: ◆ Scoring, control the match timer, group and individual ranking, group and individual knockout, etc.

2.4 Timing Screen

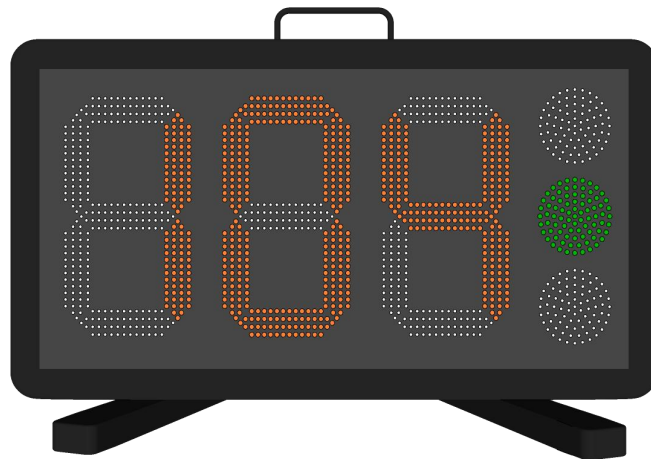| Item	Details
Timing Screen	Type: KS-AR10 Size: 1190x827x80(mm) Used with the Ultra score system. Communication: RS485 Waterproof: IP65 Material: Aluminum cabinet Net weight: 30kg Buzzer: 110dB Support: Archery ◆ Functions: ◆ display match timer and the info of player.

2.5 Flight case for Timing Screen

Item	Details
Flight case for Timing Screen	Type: KS-FLCASE-12906851080 Size: 1290*685*1080(mm) Functions: ◆ Easy to store and transport the screen.

2.6   Archery Mini Timing Screen

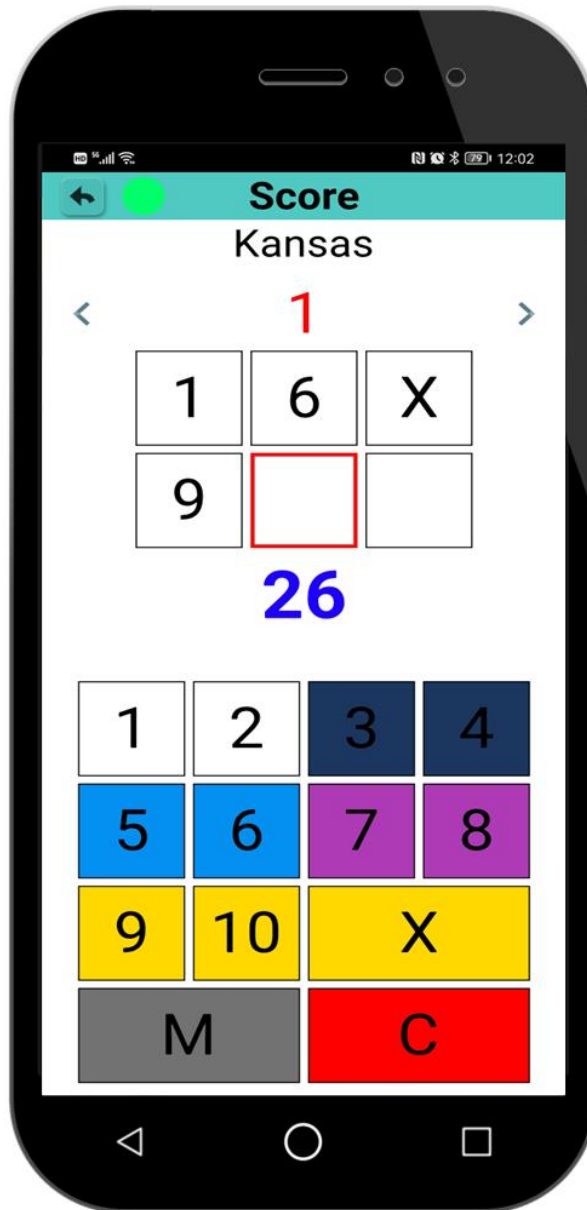| Item	Details
Archery Mini Timing Screen	Type: KS-AR10-mini Size: 630x350x60(mm) Used with the Ultra score system. Material: Aluminum cabinet Waterproof: IP65 Support: Archery Net weight: 6kg Functions: ◆ display match timer; support series connection; real time display

2.7 Communication Spool

Item	Details
Communication Spool	Type：KS-AR-W ◆ Size: 365x240x415 (mm) ◆ Material: Iron ◆ Cable: 100M

2.8 PDA Software for Referee Scoring

Products	Detail
PDA Software for Referee Scoring	◆ Support: archery qualifying, archery knockout ◆ Used to enter the player's ring number ◆ Android operating system

Kazo Vision
WEB: http://www.kazovision.com   MAIL: sales@kazovision.com

2.9 Wind Speed Sensor

Products	Details
Wind Speed Sensor	Type：KS-WSP-Sensor Power: 0.9W Weight: 0.5KG Start wind speed: ≤0.5m/s Accuracy: Wind speed: ±(0.3+0.03V)m/s Direction: ±3° Resolution: Wind speed: 0.1m/s Direction: 1° Level of protection: IP64 Cable grade: Rated voltage(300V 80℃) Measuring range: Wind speed: 0~45m/s(electricity & voltage output), 0~70m/s(impulse, 485, 232 output) Direction: 0~359° Functions: ◆ Must be used together with Archery Scoring Software. ◆ Gather the wind speed on the court, and display on the scoreboard.

2.10 Archery scoring display (for the final)

Products	Detail
Archery scoring display	Module: P3 outdoor full color Box: Die Cast Aluminum Color: Black Box size: 960*960mm*7/ group Pixels: 320*320*7/ group Composition: display*7, bracket*7, air case*1 Display content: wind speed, wind direction display, team information, team emblem, national flag, logo display.

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2.11 Wireless Host for Arrow Speed Sensor

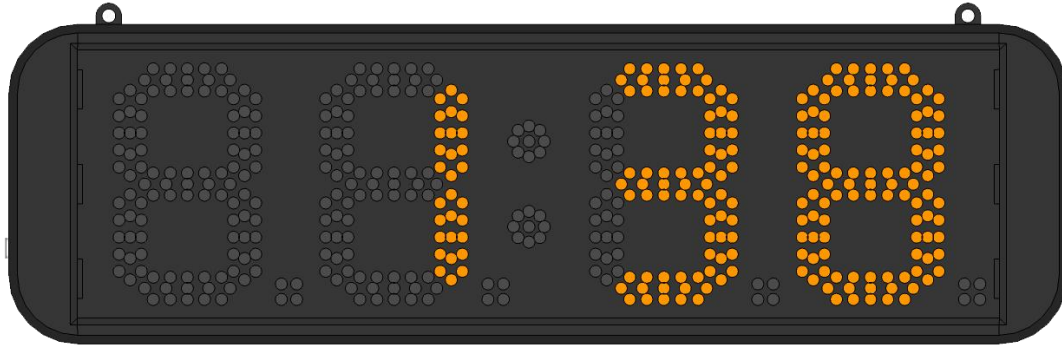| Products	Detail
Wireless Host	Type: KS-WH-BSP Size: 140x120x30 (mm) Communication: 433MHz Function: ◆ System: Must be used together with Ultra score software. ◆ Communication Setting: allow to customize the communication frequency band. ◆ Communication distance: 20m

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2.12 Arrow Speed Sensor

Item	Details
Arrow speed sensor	Type: KS-BSP-Sensor ◆ Speed Range: 5-890MPH ◆ Accuracy: +/-0.1 MPH ◆ Max Distances: 300 feet ◆ Support：Archery ◆ Compatible with Ultra score software. ◆ Track arrow speed on serves and returns from courtside.

2.13 Display for Arrow Speed Sensor

Products	Details
Display for Arrow Speed Sensor	Type：KS-MT-D Size：620x190x45 mm Color：Yellow Support：Display arrow speed Communication Interface：RJ45 network cable

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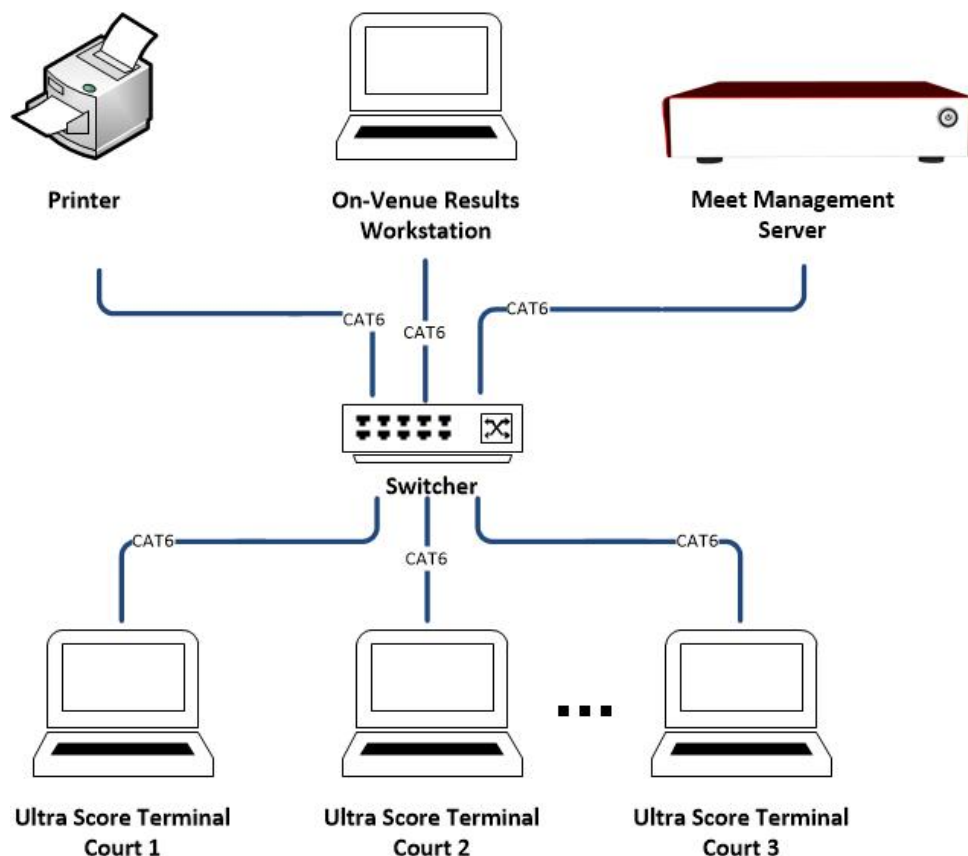
3. Meet Management System

It is composed of Meet Management Server, On-Venue Results Workstation, Printer, etc.

Linking with Online Registration System, Match Scoring System and Basketball Stats System, it can realize:

1) **Participants Management:** Information management of players, teams and referees. Both import and input registration form are available. And auto generate the order form.
2) **Match Schedule:** Auto draw the players' lots. Multi-project arrangement make the schedule more smoothly. Auto generate the bracket, order form and round form.
3) **Result Management:** Receive or record the results. Determine the players' rank, admission or elimination at each stage. Print the results announcement and send to the LED display system, TV broadcasting system and comprehensive meet manage system.
4) **Technical Statistics Arrangement:** Combine with the basketball stats software, it can summarize the info of teams' score, teams' timeout, teams' foul, players' substitution, players' foul, players' comprehensive results, and generate the integrated report.

3.1 System Diagram

3.2 Meet Management Server

Products	Details
Meet Management Server	Type：KS-MMS-MINI Size: 170x150x35 (mm) Weight: 1.0 KG Features: ● Multi-court arrangement, auto generate the order form. ● Multi-project arrangement, make the schedule more smoothly. ● Monitor the status of each court in real time, including the current field, rotation and player info. ● Court adjustment, can manually modify the match court and session info. ● Summary and print integrated report.