The Development and Application of a Set of Multi-scenarios Adaptable Table

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Abstract: The function of a general table is relatively singular, so people often need to buy several varieties of table to meet the needs for different scenarios such as, conferences, discussions, work and all kinds of shows. The adaptable table is a set of tables with a specific shape, number, angle, and ratio offside to length that can be disassembled and re-fabricated into different shapes for different numbers of people. It consists of nine parts, including two semicircles, two quadrilaterals with a 90-degree curve, three quadrilaterals with a 60-degree curve, and two rectangles. With a careful calculation of the length of the sides and the angle of the curves, these parts can fit together to form a large circular desk, a wavy desk, or many other different shapes. The wavy shape also saves space compared to normal rectangular desks.

Keywords: Multi-scene; A Set of Variable Tables; Design Scheme; Core Features; Use Scenarios

1. Introduction

This paper discusses the design scheme of the adaptable table, describes its core features and variable design, and gives some examples of the arrangement of its use scenarios, it also provides a theoretical reference for the design and practical application of multi-scene desk.

2. Overview

Since a regular table only has a single use scenario，such as office use, meetings, training, display and other applications, people often need to buy a variety of tables to meet all kinds of needs [1]. However, the most common scenario is that, we spend most of our time working and occasionally we will do some other activities like meetings or external business negotiations[2,3]. This is where the adaptable table excels, for the rare occasions where a new table may be required the adaptable table only needs to be rearranged saving time, space and money. In fact any unforeseen scenario that may arise can easily be accommodated by the adaptable table. For examplefor product display, short video or live streaming. The adaptable table is designed to meet the needs of daily work, occasional meetings, discussions, training, learning, or any other use you could think of. With a single set of tables a hundred usage scenarios.

These Multi-scenarios Adaptable tables are versatile and suitable for a variety of purposes, including everyday work, ad-hoc meetings, discussions, training, and study. They can be easily adapted for any other use you can imagine, making them an ideal choice for almost any situation. With a single set of tables that can be utilized for hundreds of different applications, the possibilities are endless.

The Multi-scenarios Adaptable table is designed to meet the needs of daily work, occasional meetings, discussions, training, learning and any other use you can think of. A single set of tables can be used in a hundred different ways.

And with the ability to accommodate any unforeseen scenario, such as product display, short video, or live streaming, an adaptable table is the ultimate solution. Designed to meet the needs of daily work, occasional meetings, discussions, training, learning, or any imaginable use, a single set of adaptable tables can serve a hundred different purposes.

3. Design Scheme

The adaptable variety table is a set of tables with a specific shape, number, angle, and ratio of side to length which can be disassembled and re-fabricated into different shapes for different numbers of people and purposes. It consists of nine parts, including two semicircles, two quadrilaterals with a 90-degree curve, three quadrilaterals with a 60-degree curve, and two rectangles. With a careful

calculation of the length of sides and angle of curves, these parts can fit together to form a large circular desk,a wavy desk, and many other different shapes. The wavy shape also saves room space compared to normal rectangular desks. The length of the straight side of the table has a certain proportion with the radius of the circular center of the curved table.

3.1. Core Features

A variety table consists of a varying number of tables in four shapes. The arc table is the core of the invention design, the semicircle table is the general composition, and the rectangular table is the connector.
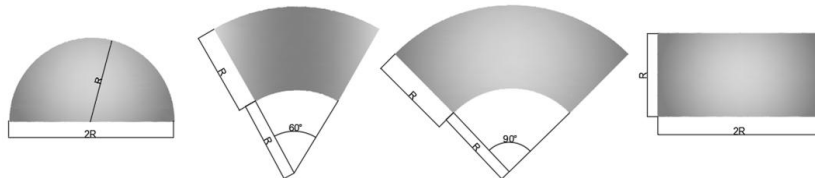

Figure 1. Four Table Types for a Variety Table

The central angles of the curved table of the **variegated** table, which are 60 ° and 90 ° , are key to combining multiple layouts ,and are one of the core features of the design (Figure 1).

These two angles can be very conveniently connected for circular, elliptical and a variety of arc angles.
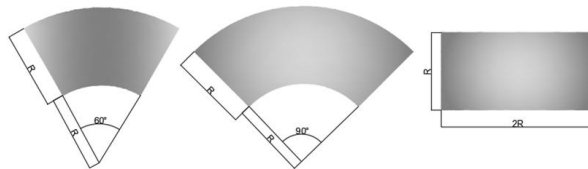

Figure 2. The Center Angle of Arc Table and Several Distance Relations

The distance between the arcs and the center of the circle is R and 2R, which is the key to combine the table into multiple layouts and is the second core feature of the design (Figure 2). Because of the multi-adaptive angle and the distance from the arc to the center of the circle, it can be easily connected.

In addition, the radius of the semi-round table is R, which is the key to combining the desk into a variety of shapes. This is the third core feature.This feature makes it easy to combine with other tables in various directions. the combination of the 60 ° arc table can be connected into a round table, which can meet the needs of eating and small gatherings of friends. The combination of 90-degree arc tables can become oval table, ,which is ideal for conference situations, if combined with a long table extension, it can function as a large meeting table. The number of long tables can be unlimited.

3.2. Variable Characteristics

The straight side length of the variable table is R or 2R, and R determines the size of the table. The proportional relationship is the fourth feature of the design considerations. In General

R is between 40-80 cm, most commonly R is 60 cm. However, the length of R is not limited and can be determined as needed.

In these four types of table, the number of long tables is unlimited just like listed in Figure 3, with a minimum of two for a basic set.

4. Use Scenarios

A Set of variety **tables**can be disassembled and re-fabricated into different shapes, according to area, number of people,to meet the needs of an office, conference, Debate, Keynote, live broadcast, training, Booth and other scenarios. With less spending, multi-functional, space-saving, more environmentally friendly features, so that one set of tables satisfies every scenario you will meet.
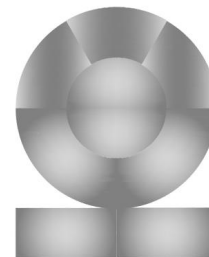

Figure 3.The Basic Table Type-Curves + 2 Bar Tables

4.1. Office Requirements

A variety table can be combined into 9 curved tables with 30 ° intervals from 60 ° to 300 °, often used in office settings. A variety of tables to meet the needs of 1-9 personnel office situation（Figure 4）. Of course, the supporting long desk for the office, but also can be combined at will. It's especially useful for scenarios like an office that serves multiple functions at the same time.
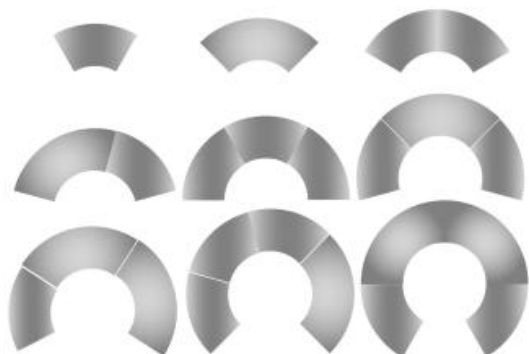

Figure 4. Several Kinds of Arrangement under the Office Situation

4.2. Meeting Requirements

Variety table can be combined into different round, oval, circular conference table, often used in the,meeting and debate scene for 2-16 people（Figure 5）. With rectangular tables, a larger number of personnel needs can be accommodated.
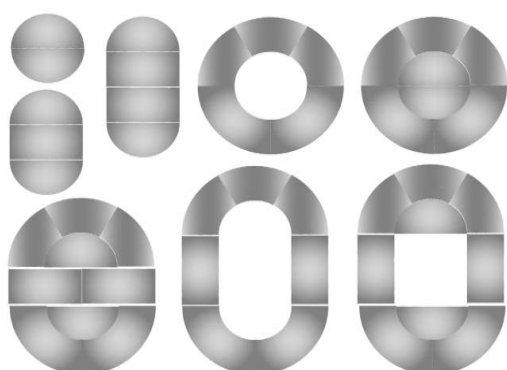

Figure 5. Several Arrangements for Meeting Scenarios

4.3. Need for Live Broadcasting and Communication

A set of variety table can be combined into a variety of special shapes, to meet the needs of a live broadcast with a single host or multiple hosts（Figure 6).If you need more space just add another set.If more space is needed, simply add another set, or just increase the number of rectangular tables to add more people and scenes.

If additional attendees or product displays are required, we can easily add another set or increase the number of rectangular tables to accommodate varying group sizes and scenarios.
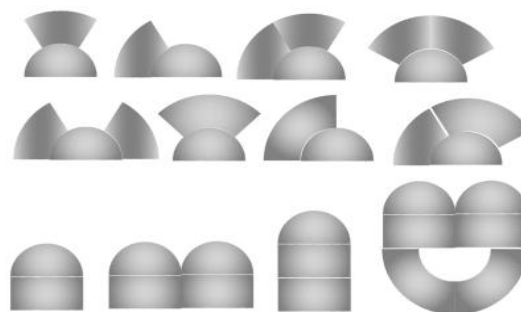

Figure 6. several Display Methods in Live Broadcast

A set of variety table can be combined into shapes to facilitate a variety of interactive scenarios such as, teaching, lectures, debates, interviews and so on（Figure 7）.

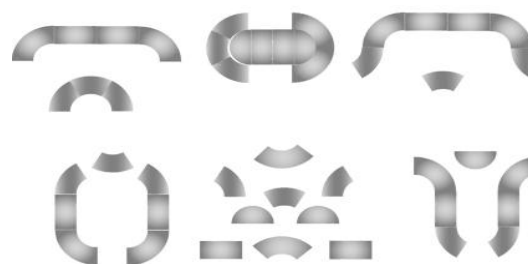Two of more sets of variety table will meet more needs with multiple functions.

Figure 7: More live Scenes for Display

4.4. Product Display

A set of variety table can be combined into a variety of arcs, wavy lines and other long linear layouts often used in a variety of display scenes（Figure 8）.
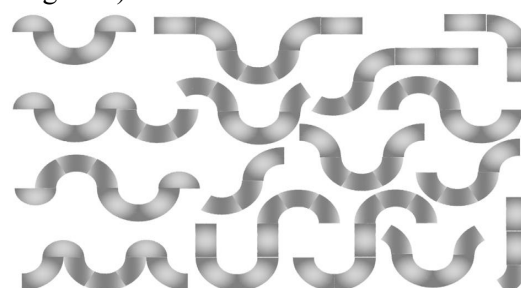

Figure 8. Display of Products and other Scenarios under Several Display

5. Conclusion

The Multi-Scenario Adaptable Table design set

incorporates specific proportions and edge relationships to combine various table shapes and numbers, allowing for over a hundred different layouts that cater to the size of the venue, the number of attendees, and functional demands. This design suits the needs of everyday office use, meetings, discussions, training and learning, product booths and many other scenarios.

The Multi-scenarios Adaptable Table design set is affordable and voluntary. By paying a $2 design fee, you will have the right to use the standard charge. The fee collection method follows the principle of voluntary payment by the user.

The design fee distribution plan allocates 50% of the proceeds to table production and the subsequent donation of products to areas in need. Additionally, 30% of the design fee proceeds are dedicated to research, development and promotion of new products. The remaining 20% of the design fee proceeds are under the discretion of the inventor.

References

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