

Submission for:

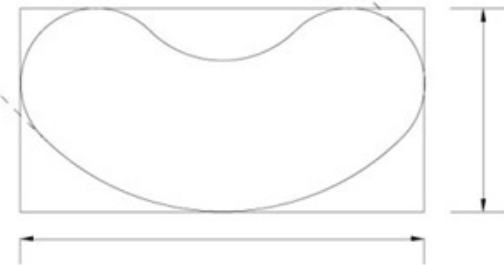


AATO CHAPTER CHAIRS AWARDS 2002

Mobile Furniture Design Project

Category:
Open

For:
**Design of Workstations and
Accessory Furniture for Education to
Accommodate New Technology and New Pedagogy
By Wenda Atkin, M.A.A.T.O**



Please consider Wenda Atkin's "**Mobile Furniture Design Project**" for the Award of Excellence in Architectural Technology Design, in the Open Category.

Wenda has designed workstations and other furniture for educational and training purposes that incorporate new technology - the function of accessible data and power. Her challenge was to renovate physical space for Sheridan College in Oakville.

Sheridan is a pioneer in "Mobile Computing", (the practice of teaching with laptops), and required renovations to convert standard educational facilities to wired spaces with data and power. She also incorporated the ideas of Sheridan's faculty and staff who were determined to reshape the conventional classroom of students seated in rows of tables with the new pedagogy of collaborative learning and improved teacher/student interaction.

She designed the stations, prepared the construction drawings and oversaw the production of the furniture from prototypes through to the installation of the finished products.

She also designed the physical floor space for these stations, prepared the renovation drawings, and oversaw the construction. Renovations to the interior space included classrooms, teacher training rooms, multimedia rooms for Audio and Video classes, lecture theatres, laptop distribution centers, faculty offices and libraries with raised flooring and barrier free ramps, and installation of IT wiring closets to service the building areas.

Sheridan now has over 70 fully wired classrooms and is considered IBM's "Best Practices Site" for teaching with laptops, and is known internationally for its innovative approach to "The Classroom of the Future".

The design criteria and descriptions of the furniture follow:

Space Design Criteria:

- Encourage the students to work collaboratively
- Teachers to be able to walk freely around the work stations to see each student's screen
- Internet & power connections within reach
- Natural flowing curves with soft edges for safety
- Natural looking finishes
- Completely wired podium to house – VCR, document camera, phone, laptop docking station, easily accessible from rear for A.V. making wiring connections, extra pull-out surface area (breadboard), and even a pull-out step for added height, and have it fully lockable with one single punch-code lock.
- Podium connection to ceiling mounted projector to project image from teacher's laptop
- Printer
- Ergonomics and barrier free design
- Superior durability for student and public use
- Cost effective for public funding
- Space efficient
- Meet all code requirements
- Diversity for future technology considerations, and various techniques of wire management
- Lots of whiteboards, (chalk is undesirable in the electronic world) to encourage sharing of ideas.
- Attention to sound and lighting

Searching through international furniture catalogues showed that there was little available on the market, so she proceeded with drafting up proposals on AutoCAD, and constructing prototypes.

It was the beginning of an entire line of wired educational furniture that is now sold to educational institutions internationally.

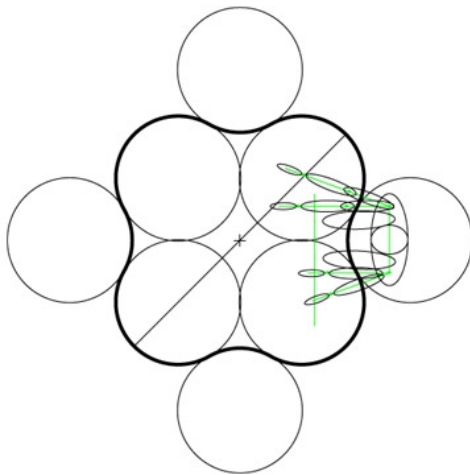
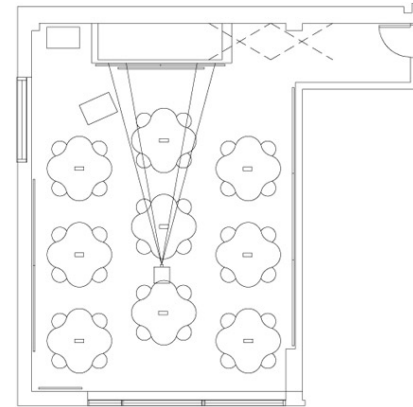
The distributor is Chairs and More, an Oakville manufacturing and distributing company. (www.chairsandmore.ca)

The Puddle Table:

Seats four students with laptops, and comes in different styles and with accessory pieces to accommodate wire management from various locations:

- From above - a two-piece table that wraps around a pack pole
- From the wall - “ironing board” and “daisy chain” accessories
- From the floor - wire management legs (as shown in photo)

Covered recessed service box houses electric outlets and data jacks. Ergonomic curves hug the user and support the forearms.



Puddle Table

The Trillium Table:

Seats three and accommodates students with both PC's and laptops.

It is designed to be used in a raised floor area, with wiring coming from below

Features include:

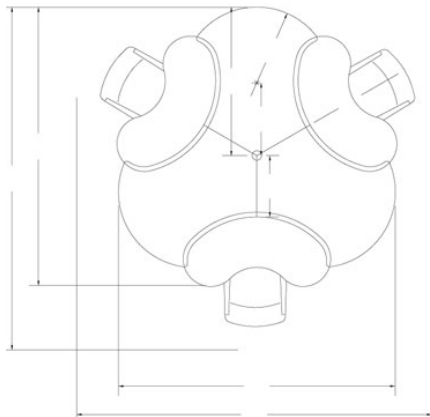
Pullout rotating CPU holder.

Wire management table base housing power-bars for each user.

Two-level surface puts data and hydro outlets at your fingertips.

Ergonomic curves hug the user and support the forearms.

These are used in the Sheridan Centre for Animation and Emerging Technologies, (SCAET) in the multimedia labs.



Trillium Table

The T-Table:

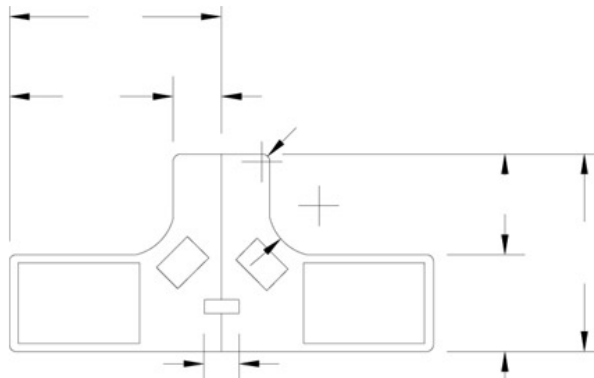
Designed for Architectural students.

Extra space for blueprint reading - each student has room for a 24" x 36" sheet.

Straight edge for manual drafting.

Suitable for wiring from wall or floor.

Put two together for a four seat station.



T-Table

Multimedia Podium:

Known as the “We thought of everything” podium.

Supports electronics including laptop docking station, document camera, VCR and phone.

Features include:

Grommets and flow-through space to support full wiring throughout.

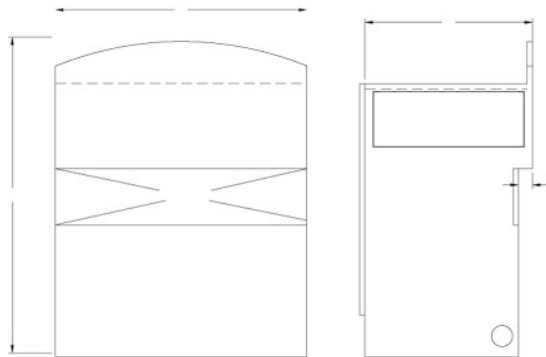
Front-hinged access panel for quick wiring connects – (the Audio Visual staff love this feature).

Secure drawer to house document camera.

Adjustable shelves.

And, as a special request from the smaller teachers, a built-in pullout step to maximize their vantage point.

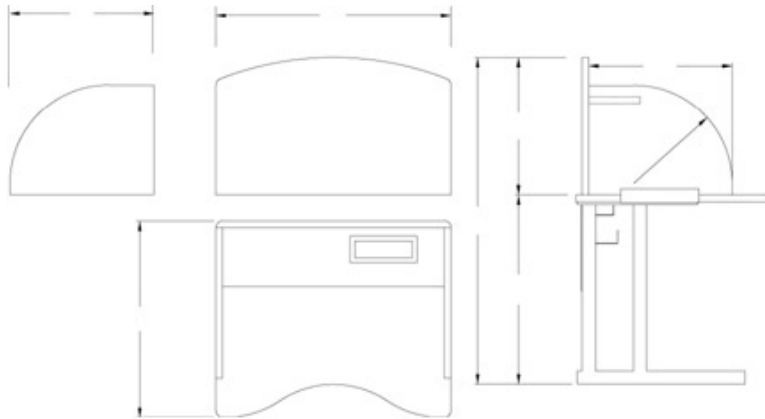
Total security with no keys required – the Security Unican master lock with three-digit code secures all – including the drawer.



Multimedia Podium

Library Study Carrel:

This is a standard carrel that has been provided with wire management trays under the work surface. Connect them in a string of up to eight, or by themselves. The visual and sound barriers surrounding the carrel have been curved to keep the flowing curved look throughout the line of furniture. They look beautiful when combined in a row. They are equipped with recessed power/communications boxes with a steel lift-up cover that houses the data jack and power outlet (this box can be seen in the Puddle table image). Ergonomic curves hug the user and support the forearms.



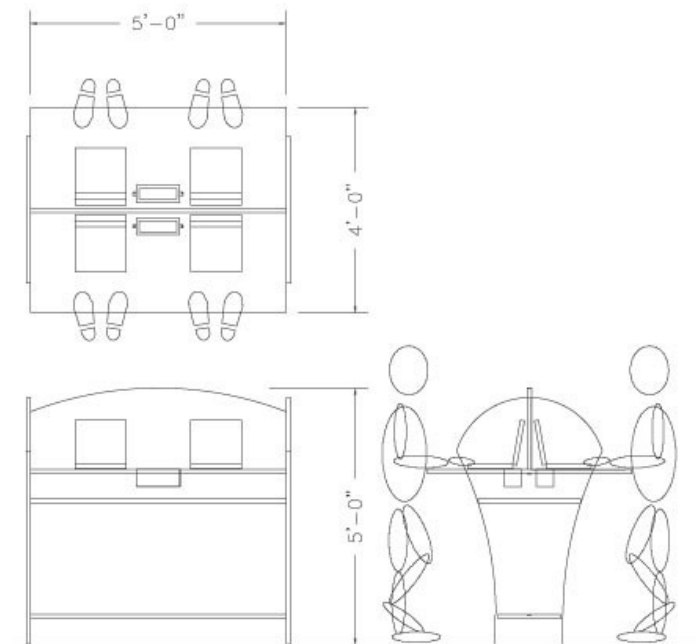
Library Study Carrel

Express Station:

Currently in production for corridor areas that will enable four students at a time to plug-in in the hallway.

Suitable for standing, or for use with tall stools.

A separate barrier free design to accommodate wheelchairs is also in production.



Express Station

Additional Furniture:

Other furnishings with the Mobile classroom include printer stands, straight row tables, tiered theatre seating with swing-out chairs mounted to a strip of work surface with recessed service boxes and interior drafting rooms with manual drafting boards with adjacent wired work surfaces.

Additional information about of Mobile Furniture may be viewed at <http://www.chairsandmore.ca/more.html> and <http://www.sheridanc.on.ca/mobilefurniture>

The article “Room Conversion Update”, written by Sandra Hodder, the Director of Delta3 Mobile Computing Initiative, Sheridan College, describes the renovations required at Sheridan’s campuses in 2001.

“From...OFFICE OF THE VICE-PRESIDENT, ACADEMIC * JUNE, 2001”

Room Conversion Update

by Sandra Hodder

Earlier this year, program coordinators of mobile programs at the Trafalgar Road and Davis campuses were asked to submit a list of requirements for each course requiring a mobile environment in 2001. These lists provided the detailed needs for all mobile programs including those that would be converting to a mobile format for the first time in the fall.

The data supplied was summarized by school and across schools. Using a benchmark value of 45 hours of occupancy per week, the total number of rooms required in September was calculated. The resulting analysis revealed that 11 rooms at Trafalgar required retrofitting and 16 rooms at Davis were in need of retrofitting.

Due to fiscal constraints, only three mobile rooms at Trafalgar will have raised flooring - G207, G307 and G407 and none of the mobile rooms at Davis will have raised flooring.

Featured in some of the retrofitted rooms will be a new configuration developed by **Wenda Atkin** of Facilities Management who has been working diligently on this project. **Wenda** has nicknamed the new configuration "Daisy Chain". This innovative design uses extension arms that are ironing board shaped. An example of this concept can be seen in C110 at Trafalgar - the student group study area.

For a more detailed overview of the type of work being done in each room, please visit our website at <http://www.sheridanc.on.ca/academic/mobile/>