Factor Ten Computer A computer system and business model that achieve factor ten reduction in material usage over a ten year period of computer usage.

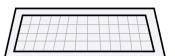
Display

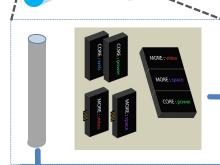
- LCD screen is replaced with video-enabled glasses with micro-projectors.
- Glasses enable almost all of the generated light to reach the eye.
- Pixels can be made much smaller
- Superior efficiency and vastly less material usage than typical LCD





- Keyboard and mouse with a single large integrated multi-touch pad.
- Pad supports an arbitrary number of inputs, including fingers and tablet pens and is customizable in function.
- Integrate multi-touch pad and OLED screen, to make it easier to see what you are typing / clicking on with your fingers.
- Thin, light, and cheap to make.





Optional OLED Display

Optional, portable, roll-up OLED screen to share

As thin as 0.05mm, requiring little material.

Modular Components

- Computers will come with several power options. Extra power packs can be inserted for more demanding operations.
- Units are all solid-state-based, with no hard disk drives or optical drives.
- Modules are designed to stay in your backpack, out of sight, and therefore never go out of style.
- Modules communicate wirelessly with external display, audio, and input peripherals, via Bluetooth, Wi-Fi, and Wi-MAX.
- Basic laptop contains only the CORE module, for the basic user who uses the computer to email, Internet, and type documents.
- Super User would take advantage of resource intensive functions like graphics and gaming with the CORE module plus several MORE modules.

Subscription Fee **Business Model**

- Customers pay subscription fee for use of hardware and software. • Fee ess than a consumer would pay for a computer based on a two vear replacement cycle.
- Cost reductions achieved through recovery, reuse, and recycling of parts in systems.
- Emphasize on maintaining optimum user experience and ability to perform required tasks on the computer.
- Maintains parts of the computer the user sees, the glasses and input peripheral, in style by changing their configuration
- Focus will be on right sizing the equipment for desired uses rather than planned obsolescence.
- Hardware will be returned to the manufacture at the end of the subscription.

Service Model

- Customer takes the computer to the service provider at retail outlets for service and upgrade.
- Hardware and software will be replaced and upgraded to maintain required system performance.
- Right-size equipment for user needs and software requirements,
- Focus on maintenance and performance of both software and hardware. Many users mistakenly assign blame for slow computer performance on hardware, when software is the culprit.
- By focusing on optimizing overall system performance, hardware will have to be upgraded less frequently.
- Individual components will come back to the service provider for recycling or refurbishina

Estimated 91% Mass Reduction

	Replacement Schedule											Mass Reduction			
Item					YEAR 5						Total reg'd	Material	Savings from replacement	Percentage of	Total material
Original Computer											5	Reduction	cycle	original mass	
CPU											2	30%	40%	5%	1%
Hard drive											2.5	20%	50%	10%	1%
KeyBoard											2	25%	40%	10%	1%
RAM	8										3.5	100%	70%	3%	2%
Housing							10				2.5	15%	50%	22%	2%
Battery											2	25%	40%	25%	3%
Screen /Glasses											2	5%	40%	25%	1%
	9.7										11	Overall	Mass as % n	f Original	9%