

Invention & Development Portfolio

Scientific Illustration Services

1019 8th Street, Ste. 107, Golden, Colorado 80401

SIS is a small laboratory in the heart of Golden, Colorado, primarily focused on life-saving and clean technologies in medicine, Developing Nations, energy and transportation. We favor the simple over the complex when possible, in order to facilitate rapid deploy, employee-equity ownership and open-source licensing.

We have received limited funding from the U.S. Dept. of Energy, EPA and private equity, most of our R&D funding is derived of profits from commercialization and launch of our own product lines, including graphic design and printing tools, backcountry products, desalination and games.

Principal Researcher and SIS founder Mike Wofsey received his Ph.D. in applied physics from the University of Alabama and his Masters degree from City University of New York. Invention is the Wofsey family business, with Mike's grandfather an inventor and Mike's dad an inventor and winner of the Purple Martin award from Martin Marietta for work in advanced welding and guidance for space transport systems.

Mike also does proprietary and non-disclosed research for medical, energy and defense institutions and is happy to bid on a range of affiliated projects.

Galaxy Gauge

Tools and products for the graphic design and printing industry.

Galaxy measurement tools - Translucent gauges for design and printing professionals, also used by law-enforcement for forensic evidence in forgery cases. All tools made in USA.

Galaxy color tools - Full range of CMYK color matching and prediction tools, digital photography and scanner calibration.

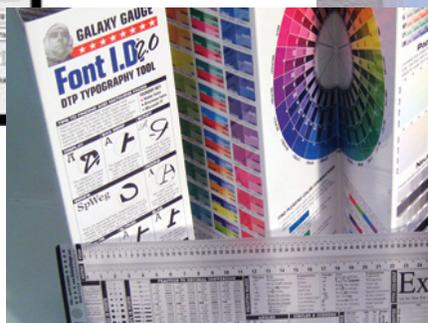
Seasonal Poster - Wall sized design reference poster for seasonal color prediction and planning, used by designers.

Hovertising - Full-color floating signs made with ultralight substrate with proprietary helium-inflatable truss

Quiver - Complete design toolboxes in custom-made shoulder-carry cases.

Eureka ReWrite - Environmentally-sustainable, reusable, wipe-off planning and organization boards. No harmful VOCs, made with coconut-oil based crayons and cleaners

Color Correction Course - Full CMYK color correction instructional course for design and printing professionals, based on the Galaxy Pixel Wrench tools



Gear Sled Products

Backcountry adventure products designed and made in Golden, CO.

Backpack Barge - Ultralight ruggedized folding boats for rowing, sailing and paddling. Carry up over 200 lbs. of human and gear down rivers and mountain lakes. Entire boat folds up to fit inside of backpack, but without fragile inflation bladders.

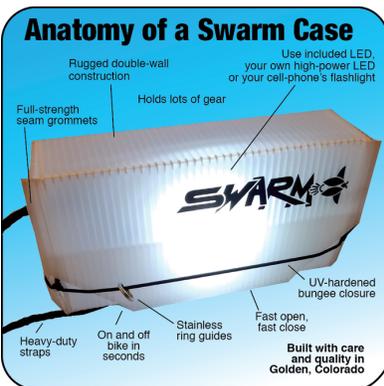
Gear Sled folding sleds - Slide camping gear or picnics across snow, ice, grass or sand, then sled folds up into 2.5 lbs. package.

Hut Sled Expedition folding sleds - Larger and more rugged than Gear Sled for backcountry first responders. Opens to evacuate injured skiers, or move weeks worth of gear and supplies. Folds up to allow quick descent. *(Benefits Colorado Avalanche Information Center)*

Crunchy Case reusable boxes - Reusable boxes, self-sealing in wide range of colors and styles. Over ten year life, versus disposable cardboard.

Swarm boxes - Light up boxes for night safety with skiing, cycling and hiking. Holds your gear.

Truck Jewel - Truck tailgate cover designed to protect expensive road and mountain bicycles from shock and rough roads that can damage frames and suspension components.



4bySeven Products

Employee-Owned, membership-licensed line of products for everyday carry. 4bySeven licensees receive zero-dollar royalty product licenses for manufacturing in country of origin. Designed to require minimal up-front investment and promote employee-ownership.

Synthetic Sheet Wallet - One-sheet, laser-printable wallet based on advanced Terraslate-brand synthetic printable paper. Ultra-thin and perfect for promotions and art fairs.

Fix-it Clip - Clip to your keychain, pack or purse and always have ultrastrong tape to fix what breaks or marks what needs marking. Designed to be manufactured by one-person in home studio.

African Lunchbox - Employee-owned company in Ghana, West Africa, with all-natural "Achacha" reed mats, which naturally repel insects and keep lunch, fruits and veggies fresh and delicious. Sales revenue in U.S.A. and Europe go directly to employee-owners in Ghana to help fund clinics, schools and business initiatives.

Reality Clamp - Wrist-worn memory aid to remind parents of a child in back seat of car. Color and shape designed to be nearly impossible to ignore.

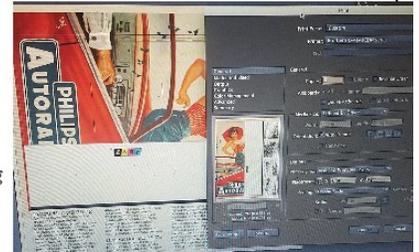
Rat Proof Bag - Grain storage for Developing Nations, uses inexpensive wire cloth.



Make a Synthetic Sheet Wallet

1. Get the sheet ready

Either use one of the art-ready sheets that comes with the incentives, or print your own from the digital downloads onto the synthetic material. Start with a blank sheet and add your art by hand, print your art using your laser printer or local copy machine, or combine both computer and hand-drawn art.



2. Add your art and cut

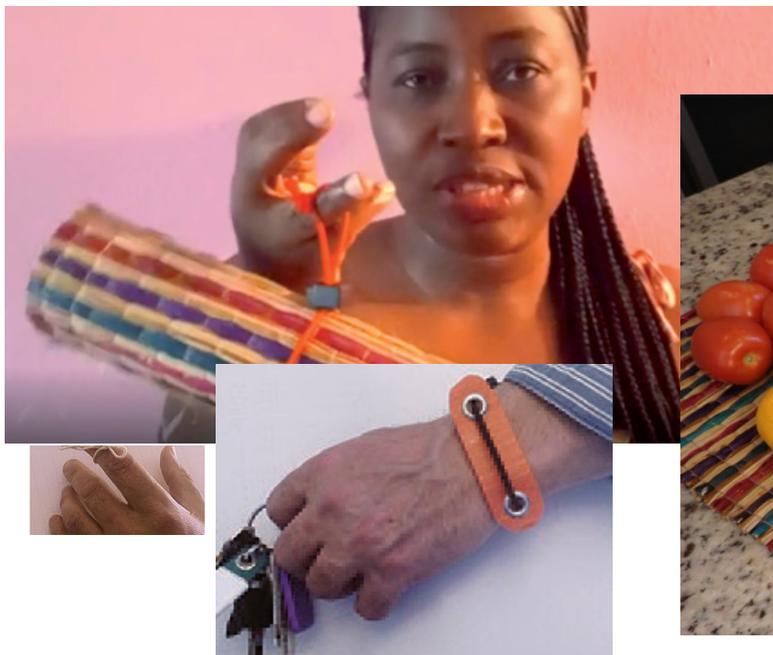
If you want to add hand-drawn art, use a solvent marker like a Sharpie, or you can use

Anatomy of a FixIt Clip

- Zinc-coated Ring
- UV-Stabilized Connector
- Flexible Color Schemes
- Unique, Everyday Carry Product
- Rugged Design
- Heavy-Duty, ultra-grip tape
- Manufacturing cost, about 50c each
- Retail for \$4 - \$5 at home stores
- outdoor stores, sporting goods stores
- Ready-Design Retail Packaging

FixItClip

- * Insanely Strong tape
- * Super thick
- * Fix, mark or mend
- * Easy to tear
- * Clip to your keyring or pack, be prepared



Interbrain Games

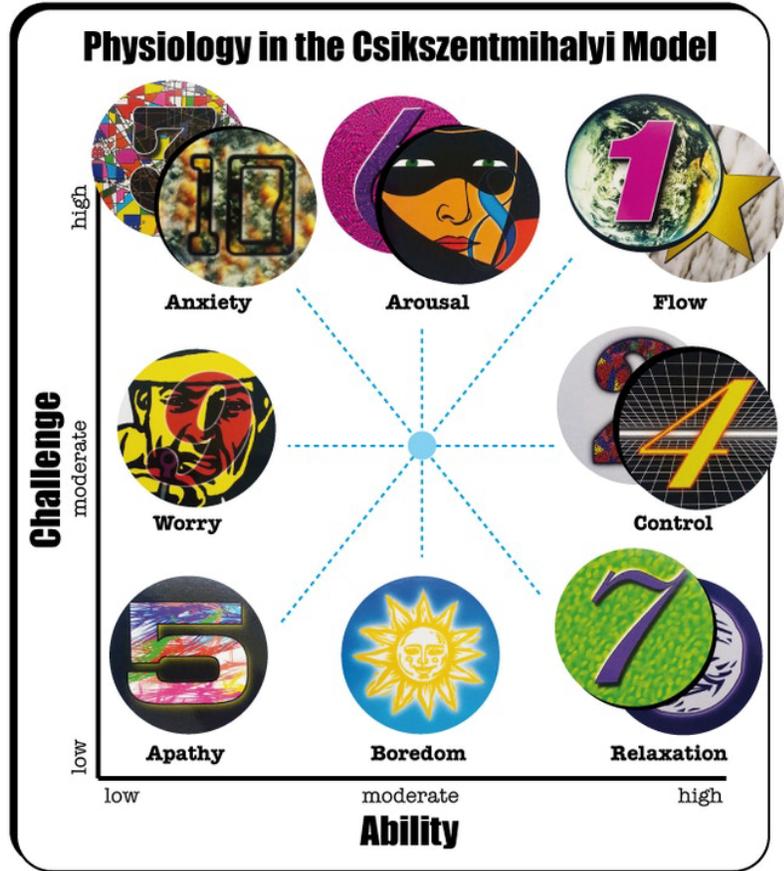
High-concept, low-tech games, made in USA.

Telepathic Training Wheels - Beautifully printed and die-cut extended range round cards based on Hungarian psychologist Csikszentmihalyi's teachings in creative flow and expertise.

Whammy Deck - Card game based on topology. Capture your opponents cards with geometric grace and cunning.

Doughmen - Designed to work with Play-Doh brand, precisely mix dough to make colors on the cards and build your Doughmen to win the game.

Tip Tac Toe - Tic Tac Toe meets a balance game. Outsmart your opponents by forcing them to tip over the game board with the weight of their X's and O's.



All about the dough ...

Be sure to get the **CLASSIC COLOR** Play-Doh brand 4 Pack, with the white, red, yellow and blue. It's about \$3 to \$5 at most any store.

AVOID the other 4 Pack colors, like the ones with purple, orange or neon colors. Your new Doughmen game is color-calibrated to the Classic Color Play-Doh brand 4-pack, not to any other colors.

Whammy Deck – How to Play for two players

Strategy 1, the Diamond Steal ...

- After deal, Player 1 places card.
- Player 2 notes Wham Factor on Player 1's card, it's position C. On that card's chart, C is worth 3. Player 2 chooses card with C that is 3 or greater, and places it over Corner C.
- Now the hot corner is D, so Player 1 places card with D that is more than 3. (In this case, it's Spacedust with 8.)

Player 2 sees a chance to steal, Player 2 finds a card with A more than 4, places "take-a-smoke" over corner A. Player 2 captures all

Use a smooth butter knife, or cheese cutter or the edge of a credit card to cut the dough along the lines.

Shuffle cards, place face down. Go around the table, each player takes **EITHER** one dough chunk or a card. If player gets a **Take** card, take the chunks shown and return card to discard pile.

Each player can't hold more than **5 cards**, or **5 loose dough chunks**. Put your fifth card in the discard pile if

Anatomy of a Doughman Card

They're snowmen, made of dough.

When you finish your Doughman, place it here.

The head takes one chunk.

The middle takes two.

The bottom takes three.

Front

The color formula shows you how to mix the chunks

Desalination and Water Products

Desalination with clean, low-entropy technologies. Solar panels make power, SEA Panels make water. (SEA stands for Solar Evaporation Array.)

SEA Panel products - Robust, field-repairable solar desalination units that can turn contaminated ground water and ocean water in pure drinking water using solar thermal power. Includes a wide range of products for many markets and applications. The guiding philosophy behind all SEA Panel products is that they should be able to be operated by a child and repaired with duct tape.

Water Wasp - Direct application of SEA Panel technology to save lives in Developing Nations. Designed to be manufactured in low-investment factory in the country of use, in order to facilitate long-term economic advantages for people in Developing Nations and attack the millions of deaths each year from contaminated water.

Lorentz Force Ion Polarization - Solid-state, non-membrane treatment technology for difficult-to-treat waters from mining and oil/gas production.



Development Timeline

2010 - Tropic Boss, SEA Panel makes first all-plastic, sun-stable, food grade solar still. Extensive site and lab testing begins.

2011 - Tropic Boss, SEA Panel begins selling first units, able to produce a gallon per day, for \$469/each. Shipping was over \$100, those units needed big boxes!

2012 - Rapid Deploy Line, Eager to see lab results reach market more quickly, the Rapid Deploy line of flexible solar stills is launched. Price drops to \$369/each for the SunFlow-R.

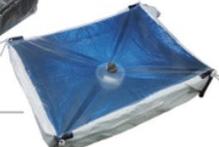
2013 - RD4.2 Launched, incorporating our advances in solar still efficiency, the price for RD4.2 is reduced to \$269/each and sells well for emergency preparedness and sailing ships.

2014 - Water Wasp research begins, Convinced that we could make an efficient, even more affordable flexible solar still, we spend a year reworking all previous designs, creating the simple, robust Water Wasp.

2015 - Water Wasp Kickstarter, After a year of prototype testing, rework and production tool-up, we launch our best product yet, with your help, the Water Wasp.










\$360 Water Wasp Swarm 6X

- Includes SIX complete Water Wasp sets, including stretch incentives.
- For emergency response and international aid responders.
- Make enough drinking water for up to 9 adults or up to 18 children.



Applied Research

Physics research in energy, medical technologies and developing nations.

Harmonically balanced rev limited engine - Spin-off from Sonic Spark Plugs. Ultra-high efficiency, lightweight 2-stroke generator to replace batteries.

In-vitro leukemia and blood separation - Uses magneto-fluid dynamics to remove misshapen white blood cells for leukemia patients.

Arterial turbulence - Measures turbulence in arteries with simple skin sensor to detect threat of stroke.

Home ozone pollution measurement - Published on Instructables.com, simple rubber-band technique to detect tropospheric ozone pollution. User data then analyzed in lab.

Dry scrubber sub-micron particulate removal - Next-gen air pollution cleantech.

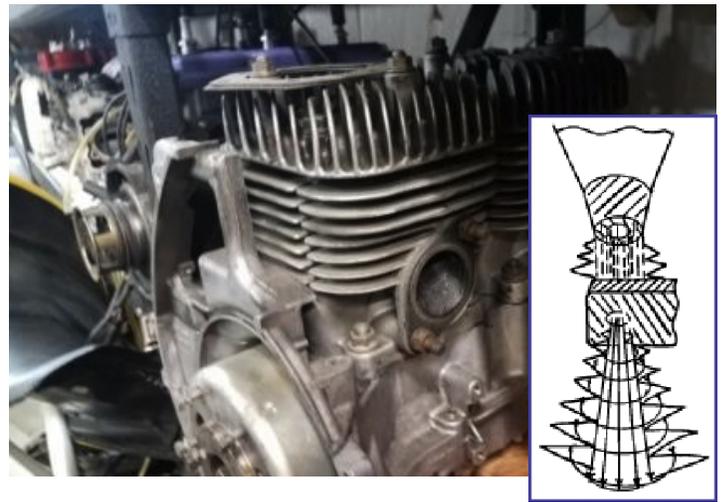
Solid state particulate sensor on a chip - Measure air pollution without fans or lasers, to be incorporated in phones and smart watches.

FlareTrap - Simple employee-owned trap to catch and condense flare gas from wells and landfills.

In-situ ion polarization mining - Capture rare earth elements in the ground without mining scars and toxic waste. Entire mine fits in 6-inch bore hole.

Weak Force Jet - Neutrino flux interaction engine.

National Air Grid - Long term storage of excess electrical power using compressed air, but in thermodynamic-advantage idled pipelines.



$$l = \frac{1}{M} \left[\frac{72\eta R}{q\mu IN} \frac{W^2}{d^2} \right]^{1/3} \approx \frac{37342}{M} \left[\frac{W^2}{d^2 IN} \right]^{1/3},$$

$$t = \frac{\rho d}{MS\eta} \left[\frac{72\eta R}{q\mu IN} \frac{W^2}{d^2} \right]^{1/3} \approx 1.55 \times 10^7 \frac{d}{M} \left[\frac{W^2}{d^2 IN} \right]^{1/3}.$$

