Hardwar, Softwar, Wetwar: Operational Objectives of Information Warfare
by Atreides/The Nemesis Group

Society, a political economy, is about a mechanism I will refer to as the 'value chain.' A value chain is an aggregate infrastructure of processes, best explained by example.

One instance of a value chain comes from Mankind's early days--metal. Based on what ores are readily available in an area, Man has built a variety of implements, starting with rough-hewn rock or wood, moving via the process of discovery and learning to more complex substances--iron, bronze, steel. Years and centuries pass, and the materials, knowledge, and processes that started turning out plowshares now turn out automobiles, airplanes, bridges, skyscrapers. Each step in the process, each advance made, adds just a little more value to the output of the previous step, building vastly more complex systems from the interactions of numerous smaller ones.

Politics is about the ownership and control of the value chain. Western democracies, founded on such contracts as the Declaration of Independence and the Constitution, are based on principles that every individual owns themselves and the fruits of their labour, that they are each entitled to an equal opportunity to be responsible for themselves. Western governments are the tools, the value chain the citizens created to gain an economy of scale--to do those things collectively that are best done so. Among such things is the provision of a common defense, in short, war.

War is a challenge to or from the value chain. Just as the discovery of steel heralded a new wave of conquests against those less developed, war is the competition of value chains. Whether fought with Toledo steel swords, or composite-armour tanks, conventional and unconventional warfare are about attacks on various stages of the material value chain, by methods best suited to the artack on each link. This is 'hardwar'--an obsessive emphasis on the real control of real things, in methods, means, and end objectives.

This approach loses sight of the fact that the material value chain is not the only value chain, and I would venture to say, not the most important one. Value chains stretch back to the beginnings of civilization, by definition in fact. Behaviour is purposeful, directed, and a driving force is needed, a motivation. Maslow worked out a hierarchy of needs that do much to explain the beginnings and evolution of political economies.

Maslow's Hierarchy of Need looks like this:
-- Physiological needs--survival, food, drink, health;
-- Safety needs, physical and emotional needs--clothing, shelter, protection;
-- Affection needs--family, belonging;
-- Esteem needs--self-respect, achievement, appreciation;
-- Self-fulfillment--realization and utilization of one's potential.

Man's Agrarian phase of development, and that shadowy period before, were focused on an almost purely material value chain, because just staying alive, reproduction and metabolism, took all of an individual's time and energy. Even here, however, the roots of another value chain are visible, something I will refer to as the informational value chain, a misnomer as I will point out shortly, but a necessary one for convenience of expression and understanding.

The process of survival was driving the beginnings of discovery, creating language so that such discoveries could be passed on, and education so that they could be made aggregate. Man was learning many things--how to build shelters, when to plant crops, how to mine ores and smelt metals, what plants are edible, the making of weapons, and the strategies and tactics of using them. Necessity is a Mother.

A mixed material-informational value chain existed in the Industrial period, as man had learned how to take his simple tools to make more complex tools, using them to add more and more 'value,' levels of complexity. This complexity forced specialization, and herein lay the foundations of the modern dedicated informational value chain. Obviously, this bifurcation of material and informational value chains is unnatural--in many ways, from our distant perspective, the advances made along the material value chain are purely the result of advances from the informational value chain.

While the process of the material value chain is dependent on the materials it relates to, the informational value chain has a much more (and at the same time, less) clear mechanism, which looks like this:

Data --> Information --> Knowledge --> Wisdom,

where the arrows represent 'transforms or evolves into.' These stages merit some explanation.

Data becomes information through a process of filtering, an exclusion process. In mathematics, this is set theory, where the concepts of 'belonging' and representation open a can of worms. Think of it as finding the needle in the haystack by removing anything that isn't a needle; more generally, the item or items are filtered from the larger body of data. Gregory Bateson called information 'any difference that makes a difference,' and he was quite correct. There are number of 'Smith' or 'Johnson' entries in the (U.S.A.) phonebook, but they aren't all necessarily the one you want to talk to.

The next stage of the informational value chain is information being transformed into knowledge; we have no 'real' understanding of how this occurs in our brains, but it has roots in our abilities to perform analysis, generalization, abstraction, extrapolation, and utilization. These are all functions of the decision-making process.

The final stage is the evolution from knowledge to wisdom, a deeper comprehension of the concepts, systems, relationships, interactions, and integration.

Oddly enough, explanation of the chain points out the problem with calling it an 'informational value chain,' just as this is not really the 'Information Age'--society at this stage is actually oriented around data, shuttling it from one point to another, bumping against the constraints of throughput, bandwidth, and interactivity. There is no large scale function, no part of the political economy providing value-add in the process. The reason for this explosive emphasis on data is obviously the computer, and all the things a computer makes possible; the reason for there being no true value-add is that while computers are very good at moving data around, and can even be used in a limited way to filter data, the rest of the value chain is totally unaddressed by the advances in technology (forays into artificial intelligence notwithstanding).

Returning to the application of this thinking to the topic of warfare, conventional warfare is concerned primarily with the material value chain. Attrition-style warfare seeks direct control of the material basics--labour, capital, and resource--while manoeuvre-style warfare focuses on control of the 'key points,' dependencies in the material value chain. Unconventional warfare seeks to overload the material value chain by various methods, whether a nuclear weapon vaporizes large pieces of it, or guerrilla warfare undermines the chain by an 'ontological judo,' using the dis-economies of scale in the value chain against the value chain itself.

For simplicities sake, but following the same line of reasoning, I define information warfare, or 'softwar' as I think of it to avoid the misnomer, as conflict based upon and/or directed at the informational value chain.

Given the preoccupation of advanced political economies with the movement of data from point-to-point, it is no surprise that most thinking about softwar revolves around 'denial of service' (DOS) attacks shutting computers and networks down. There are a number of problems with this--it is very much an artifact of hardwar thinking bleeding over into softwar, it is unsubtle, inelegant, it betrays a lack of understanding of the 'first principles' of warfare, it looks more like a 'scorched earth' policy than any high strategy, and most of all, it misses the forest by looking only at the trees.

In hardware, the most catastrophic attack that can be made is directed at the very bottom of the value chain; this is why there is a perfectly rational fear of nuclear, biological, and chemical weapons. Softwar is completely reversed--the farther into the value chain any attacks are made, the more leveraged they are, the less 'force' required, just as with the differences between attrition- and manoeuvre-style warfare. Clearly, a more detailed explanation of the relationship between an informational value chain and softwar is called for.

The existence of a deep informational value chain is, in many ways, the defining characteristic of an advanced civilization. This very existence is the first element available in softwar--just as steel won out over iron, having satellites beats not having them, and electronic communication beats a horse-borne messenger (figuratively).

The next stepping-stone to softwar is intelligence, in the espionage sense of the term; intel is largely a function of the collection of massive amounts of data, and then filtering that deluge. As far back as the dawn of Man, intel was a function of softwar, which comes as no surprise to anyone, least of all people such as Sun Tzu. Knowing its place in the value chain helps to explain many of the dilemmas of the intelligence community:

-- The escalating need and dependence on electronic collection of data countered with the information overload disaster;

-- The inability to keep pace with the increasing load of dynamic data;

-- The problem of electronic intelligence (ELINT) missing subtleties of motive, intent, and other nuance that human intelligence (HUMINT) used to provide;

-- The inherent flaw of the intelligence process remaining unbiased--the transformation of data into information automatically calls in to play a paradigm, interpretation, judgment, prioritization; this bias is amplified and exaggerated in the process of augmentation.

Softwar attacks on the civilian value chain infrastructure actually look more like hardwar attacks. Denial of service (DOS) attacks can range across the value chain, effecting the contributory infrastructure and social contract the way terrorism does. There are common elements, obvious from the assessment that the current phase of social development is only that of a data-based society--attacks will be on the electronic transport layer we think of as communications, and the control mechanisms we generally rely on as the 'societal glue.' An important note is that DOS attacks on civilian entities can't go farther up the value chain because there is no chain there to target. Military DOS attacks are focused on many of the same elements of command and control; this leads to the conclusion that civilian attacks are likely only to be collateral consequences from military objectives. The fear that such attacks will occur is well justified--after all, the techniques used by guerrillas and terrorists worldwide already map into this new domain. Whether they work is another things altogether--much of the low end of the military informational value chain is already hardened, a by-product of the nuclear

age. Satellites have always been assumed to be 'expendable,' and military command-and-control has been a target in millennia of warfare--capture of a commander in a hierarchical structure is more effective than trying to grind down troops, and while a heterarchy would better withstand attacks, no certain blow could be struck. This sort of softwar attack is survivable, correctable, and will cost a great deal in damages, but much like Pearl Harbor in World War II, it is likely to only infuriate the citizenry of the targeted political economy.

More subtle methods of DOS attacks may be effective, however. Historically, when analysis and decision-making power were seated in the same person, these were worthwhile targets; in modern times however, most politicians are totally orthogonal to the informational value chain, providing no value add themselves. The tools in place to provide such value add are, however, directly susceptible to such attack, and in many cases aren't even protected.

Assume for example that an Adversary planned a conflict and wanted to impair the decision-making abilities of a powerful, advanced ally of their target. Are attacks on orbiting satellites that provide data on their region even possible, let alone cost effective? Unlikely. A little leverage brought to bear, however, can answer that problem. Imagine this chain of events:

-- A set of video cameras are placed so that they collect data, the license plates of vehicles going into the 'hostile' intelligence agency;
-- Data is continually collected and processed;
-- The license plates are checked for in a variety of databases to provide the name and any other data on the owner and likely driver;
-- The driver's credit and personal data is pulled, as well as any other information that can be checked from the ever-growing number of databases;
-- Based on the data derived, a structural map of the organization is developed, founded on such things as salary levels, education level, specialty, et al;
-- Certain functions are targeted, such as analysis sections or skill bases, such as knowledge of the Adversary's region or language;
-- Just prior to hostilities, such individuals are targeted for either subversion or elimination.

This sort of DOS attack is directly targeted at the deeper levels on the informational value chain--those with knowledge or wisdom about the region and Adversary. It has many benefits besides being cheap, direct, and leveraged; it leaves the political players 'in the game,' but without any way to makes sense of the overwhelming levels of data generated prior to or during a conflict. Because of the common mechanism of reliance by the military on politicians to set objectives, any coherent military response by the targeted country is also hamstrung. It takes no great sophistication to carry out exactly this sort of attack, but the impact, particularly the transformation of the political structure into one of 'value subtracted,' is considerable. Recovery from such an attack is a matter of luck in making all the right choices in the time period it takes to rebuild the lost functionality, an unknown period, but far longer than rebooting a computer and reinstalling software as after a DOS hardwar attack.

A true softwar attack is one of covert perversion, best thought of in terms of a military adage--war is deception. People make decisions based on their cognitive environment, their infosphere; control of the data comprising such an environment allows a certain amount of control over those in it. The drawback of course is that the better the information of the opponent about their infosphere, the closer the deception must be to the reality provided by the environment. Very much a situation of Garbage In, Garbage Out (GIGO), this sort of attack is about the use of lies and mis/disinformation to produce very real results. It can be very direct, and successful when so--surrendering when you only think you are surrounded but aren't, inflatable tanks and airplane skeletons to misdirect thinking regarding the time and place of an attack, or an impossible-to-implement missile defense system that leads a believing opponent to spend itself into collapse. Such attacks will become more prevalent and subtle when direct control of data channels is possible; the double-edged sword of the media can be grasped more directly than was CNN by the West during the Gulf War, and to much better effect, but care must be taken to avoid the sapping of will that occurred during the Viet Nam conflict.

Viet Nam, besides teaching a host of lessons in conventional warfare, guerrilla warfare, hardwar, and softwar, was also a masterful piece of the 'high end' of softwar--'wetwar,' the battle for will and mindshare.

Wetwar, derived from the concept of 'wetware,' the hardware/software of the human mind, is war conducted entirely through subtle, mainly non-violent means, to control the deepest end of the informational value chain--an insidious form of propaganda directed at will, support, and perception of data. Viet Nam is a case study of intentional and unintentional wetwar, with brainwashing, confessions by POWs, media bias in the data --> information link, GIs televised coming home in body bags, Hanoi Jane, winning yet losing the Tet offensive, bombing campaigns that drove neutral civilians to join the alternative and hostile infrastructure set up and controlled by the wily opponent, et al. This form of warfare is the pinnacle of skill, where your opponent defeats himself, and then writes you a bank draft and says he was sorry.

Information warfare, whatever its form--hardwar, softwar, or wetwar--is simple and complex, subtle and obvious, a product of an advanced civilization yet oddly echoed in ancient Sun Tzu, part of the past and a still-unrealized future. It can no more be dismissed than any other form of war; not to prepare for it is the act of a fool, yet it is difficult to prepare for. Focusing on one small area, such as DOS attacks, leads to errors just as the idea of attrition and air superiority did in Viet Nam--control of one part of an infrastructure or value chain is like trying to control a puppet with only one string. Understanding information warfare is very much a search for an understanding of conflict and progress, Aquinas' concept of a return to the first principles. You can go so far down the path, only to find yourself back at the very beginning.

"In battle there are not more than two methods of attack—the direct and indirect; yet these two in combination give rise to an endless series of maneuvers. The direct and indirect lead on to each other in turn. It is like moving in a circle--you never come to an end. Who can exhaust the possibilities of their combination?" — Sun Tzu

The preceeding article is Copyright 1995 by the author.

Ω

Decoding Touch Tones
by Thomas Icom

Doing this is relatively simple for everyone except all those individuals on Usenet who keep asking about it. This ought to set everyone straight. Decoding DTMF (Dual Tone Multi Frequency: what everybody outside of Ma Bell calls Touch Tones, as "Touch Tone" is a trademark of Western Electric, one of Ma Bell's children.) is simply a matter of having access to a DTMF decoder. These can be purchased in various levels of sophistication, built, or "borrowed".

Starting with the simple first, I'll talk about "borrowing" a DTMF decoder. If you have a pager, you can borrow one of the pager company's. Record the Touch Tones you wish to decode, call your pager, and play the tape into the phone. When you get paged, the numbers on your pager will be the DTMF sequence. You can do the same with certain VMBs. When you call a VMB, enter in a bogus DTMF sequence and see if it'll tell you "NNNN is not a valid mailbox.". If it responds with the sequence you'd entered, you can use that to decode unknown DTMF sequences.

Those of you with a Soundblaster/AdLib card in their PC can try one of the programs that turns your sound card into a DTMF decoder. There are a few such programs floating around on BBSes and FTP sites. The RuneStone BBS (official Cybertek support BBS 203-832-8441, NUP: Cyberdeck) also has Soundblaster DTMF decoder software available for downloading. I experimented with a few pieces of software and wasn't impressed; as all of the one's I tested were prone to falsing and lacking somewhat in sensitivity. A PC also lacks portability for real-time decoding in the field. Since they are available for free however, you might want to try what you can find and see if it works for what you need it for. One point which you should be aware of is that some of the programs available require a "real" Soundblaster. If you have a clone they won't work.

For those of you who can solder, DTMF decoder ICs are sold for less than $10. They can be interfaced to a PC and work well. Full DTMF decoder kits are also available for less than the finished product. There have been hundreds of DTMF decoder schematics published and released into electronic domain (some are on the 'Stone) over the years. If you're going the do-it-yourself route, avoid plans that are more than a few years old. New ICs are constantly being developed which cost less, and are more reliable.

Schematics which you should avoid at any cost are ones which implement the 567 Tone Decoder IC. While it was a nice chip in it's time; by today's standards it takes too long to get a good lock and is too prone to falsing. A DTMF decoder implementation using this chip is also 10 times the size of more modern designs, as a total of eight 567 chips are used to do the job that one chip can do today.

One that is readily available appears on page 169 of Paul Bergsman's excellent and highly recommended book __Controlling the World With Your PC__. I acquired my copy at my local Barnes & Noble, or you can get it from HighText, P.O. Box 1489, Solana Beach, CA 92075. Paul's book is the bible for real-world interfacing for the PC.

Another set of recently published DTMF decoder plans can be found in the September 1995 Issue of __Nuts & Volts__ magazine. These plans use a California Micro Devices CM8880 IC and a BASIC Stamp. A kit based on this project is available for $22 (not including the BASIC Stamp and LCD Serial Backpack used for the display) from:

Scott Edwards Electronics
964 Cactus Lane
Sierra Vista, AZ 85635
520-459-4802
FAX 520-459-0623
72037,2612@compuserve.com

Finally, one can go and buy a completed DTMF decoder. The assembled units start at less than $60, and used equipment can be had for even less at Hamfests. Starting at the bargain basement we have:

Motron Electronics
310 Garfield St., Suite 4
P.O. Box 2748
Eugene, OR 97402
800-338-9058, 503-687-2118
motron.info@emerald.com

Their TDD-8X DTMF decoder is $59. It features an 8 digit display, 104 character memory, and serial port for connection to a PC. For DNR work in those backwoods areas that have yet to receive DTMF service, Motron has the TM-16A which will also decode rotary dialing for $179. With the RS-232 port option the price of that unit goes up to $249. For those of you who have remote control

applications in mind, for $99 Motron sells their AK-16 DTMF Controller Board. It features 16 relay driver outputs, up to 12 digit security code capability, ASCII serial output of incoming DTMF tones, and DTMF user-programmability.

For those looking for a nice looking "Rolls Royce" type unit in order to impress their next TSCM client, you have two choices:

Optoelectronics
5821 NE 14th Avenue
Ft. Lauderdale, FL 33334
800,327-5912, 305-771-2050

Universal Radio
6830 Americana Pkwy.
Reynoldsburg, OH 43068
800,431-3939, 614-866-4267

Universal sells (for $399.95 + $6 s/h) their M-400 decoder. This unit decodes DTMF; as well as POCSAG, GOLAY (pager modes), CTCSS (PL), DCS (DPL) (tone codes which are used to access radio repeaters and prevent interference), and whole bunch of other digital communications modes used on the shortwave and ham bands.

Optoelectronics also sells a similar unit, their DC440. This unit is only $259, and only decodes DTMF, CTCSS, and DCS. It has a 127 character memory and interface to a PC when mated with a CI-V to RS-232 converter. If you don't need all the extras the Universal unit has and want something that'll interface with a PC, go with the Opto' unit.

$$\Omega$$

Backyard Pyrotechnics I
by Pyronomy

The following series of articles will give details on how pyrotechnic devices might be constructed. It is my intent that the descriptions given are for informational purposes only. WARNING: THE FOLLOWING MATERIAL DEALS WITH PYROTECHNIC DEVICES THAT CAN BE HAZARDOUS. SO PLEASE USE CAUTION:

I think that it would be prudent to explain the difference between pyrotechnics and explosives. Explosives are broken down into several categories. Low order explosives are things like gunpowder, flash powder, black powder, etc. They tend to burn rapidly or deflagrate. There power as explosives usually comes from the bursting of the container that they are in. High order explosives are things such as dynamite, plastic explosives, nitroglycerin, etc. They work under a different principle called detonation. Detonation in the most basic terms is the rapid, self-propagating decomposition of an explosive accompanied by a high pressure-temperature shockwave that moves at 1000-9000 meters per second. This is not generally considered in the chemistry world as burning. Primary or initiating explosives are the last class. Some of these are mercury fulminate, lead azide, etc. These can be sensitive to either shock or burning or both. They generally are more powerful than low explosives and produce a shock wave that is used to detonate high explosives. The only class that we will be dealing with in this series are the low order explosives.

Pyrotechnics are an art form that has a history thousands of years old. They are constructed for the purpose of providing exciting displays for groups of people large and small. They existed even before anyone conceived the idea of using black powder to hurt their enemies. Explosives on the other hand generally are used to do some type of work. Be it in war or in peace they generally have a tendency to destroy. If this is your purpose then this article isn't for you. Most pyrotechnic devices are explosive in some way and are therefore listed as explosives. Usually this is necessary for the devices to achieve the desired effect. I will cover devices that are intended to make pleasing displays be it on the ground or in the air. If you want to play with the big boys go join the army.

At this time I would like to say a little something about this outrage in Oklahoma. McVeigh, or whoever is guilty, I hope they give you to the families of the ones you murdered YOU PIECE OF DUNG. While I am on the subject what is this bullshit the press is doing to the Militias. I've never seen such a load in my life. Several slimes do something horrible and the press goes and stereotypes a whole class of people without any investigation to see what kind of people they really are. Well if you are reading this you obviously don't believe anything that those jerks say anyway. What was the purpose of this bombing anyway? Are we supposed to be impressed with this chicken shit attack? You didn't even have the balls to be there. What are you pissed about Waco? Hell I didn't like it either but I wouldn't kill someone because of it. Lets just pull the plug on you and be done with it because you obviously don't have a clue.

Anyway it's a shame that this happened because it has side effects that some people are not aware of. For one thing those people that find the main theme of this article interesting and might want to try working with fireworks will soon find it harder to get some of the things that they might need. The laws will probably get a lot tougher on anyone that might construct anything that someone else who is either nosy, stupid, or misinformed might think is a danger to society. They might even see the required reading material disappear. I don't know about you but it bothers me a hell of a lot.

I don't want anyone to have the false impression that I am all knowledgeable on this subject. For me it is a hobby that I happen to cherish with a very large passion. There will be some suggestions later on some reading material that will help.

WARNING: THESE DEVICES CAN BE DANGEROUS POSSIBLY FATAL SO BE CAREFUL. Safety is the key to successful and pleasing pyrotechnic displays. Therefore we are going to discuss safety now and throughout this series of articles.

Some of the DO's and DON'Ts

NO SMOKING: This means while handling chemicals or when constructing, firing, and transporting devices.

Be gentle when handling your devices as some can be sensitive to rough handling. You can't be too careful when involved with a hobby like this one.

The first thing you should do before constructing any devices is to check the laws wherever you are to find out if it is legal. There are several different classes of explosives that have been designated by the Dept. of Transportation. Pyrotechnic devices like the common firecracker, bottle rockets, those little pieces of junk that just burn on the ground with merely a whimper and party poppers are in Class C. The smaller sized paper tube launched aerial shells that go up a couple of hundred feet then burst are also Class C. Some states sub-divide this class into sparklers and ground devices that shoot sparks. Some are even so lame as to have everything banned. There is also Class B. This is where most of the big professional displays reside. These are probably familiar to everyone who has lived through one Fourth of July. They consist mainly of a round that is launched from a metal tube and burst high in the air. I'm not exactly sure what the boundary is between Class B and C. The largest aerial shells that I have seen on sale in fireworks stands was 2 1/4" in diameter and was marked Class C. Most of the aerial devices that we will be discussing will be higher than normal altitude Class C.

OK back to safety. Do not fire any devices on public property as it is dangerous and probably not legal. The author assumes no liability for damage or injuries caused by the use of this information. Okay enough so here is the list of minimum safety equipment needed.

SAFETY EQUIPMENT NEEDED	WHERE TO GET IT
Face Shield	Hardware Store
Breathing Mask	"
Thick Latex Gloves	"
Welding Gloves	Welding Supply
Welding Arm Shields	"
Leather Shoes	

The equipment listed should be used anytime you are mixing your chemicals or when constructing devices. I know they are cumbersome but it is better to be safe than sorry. Especially the shoes.(Blackmatch will burn through house slippers. I know this from personal experience.)

Credits

It would be wrong for me to continue without giving credit to the individuals from whom I acquired the basic information that I am about to impart to you. The first is the fantastic series of books by Kurt Saxon entitled The Poor Mans James Bond. There are four books in the series covering every possible area of self reliance. All contain numerous how-to manuals from A to Z. You want to know, it's in there. Another one is Granddad's Wonderful Book of Chemistry. It contains everything that you would want to know about laboratories and chemical processes. Another series written by Mr. Saxon is The Survivor. This series is jam packed with how-to articles that are on every subject that you could possibly want. I would highly suggest all of these books as they are very valuable. The best ones as far as pyrotechnics are concerned are Granddad's, PMJB I and PMJB II. In PMJB I you will find Fireworks & Explosives Like Granddad Used To Make which is a group of articles including Scientific American 1903, Dick's Encyclopedia of Formulas & Processes 1872, The Techno-Chemical Receipt Book 1896, and Henley's Twentieth Century Formulas 1907. It also contains Pyrotechny by George Weingart (1947). It is considered by most to be the authority on pyrotechnics. The last one is American Pyrotechnist by VanderHorck. It contains articles by numerous authors about constructing mechanical devices used in the manufacture of pyrotechnic devices. In PMJB II you will find a reprint of Tenney Davis's book The Chemistry of Powder and Explosives published in 1943. It is modern and has done away with most of the older terms used for some of the chemicals used. However it is a very good idea to have Granddad's around as it does explain the older terms. I would like to express my gratitude to Kurt for the vast effort he has put into this series. It is well rounded and will provide a great many hours of pleasurable reading. THANKS KURT. would also like to suggest getting a chemical dictionary or maybe borrow one and check certain aspects of the chemicals that are used in pyrotechnics. You should especially check the sections on hazards, properties, and usage.

I would like also to thank Stormbringer in D.C. (BBURPP) for turning me on to PMJB and for the inspiration. Asrael (OOPS Sorry bout them tax records Dad) Asphyxia also for the inspiration. Hey AZ be careful with that Perchlorate. And last but not least Thomas Icorn for the opportunity to pen this series.

Materials

The hardest part of it all is acquiring the materials unless you have an unlimited budget which I think most folks don't. So I am going to give you some hints on how to construct some of the things that will be needed.

Scales are a must if you want your compositions to be consistent. All of the compositions used are given by weight proportions. A cheap set of proportion scales are to be described. You will need the following:

Wood appox. 18"x 4"x 1/2"

Plastic/Vinyl strip 12" long and as thin as you can get it (I used a piece of 1" vinyl window blind)

Wire appox. 4" long and fairly stiff 10-14 ga. (I used brass brazing wire)

Bend the wire in a U shape 3/4" in from each end. Make two holes in the wood slightly smaller than the wire. The holes should be placed so that the wire is in the middle length-wise and perpendicular to the length and 1/4" deep. The wire should be inserted so it is no more than 1/2" off the board. Put a slot in the plastic so that it will balance on the wire. Add a small container shaped like a scoop at one end of the strip by using a 2" piece of plastic drinking straw and duct tape. On the opposite side of the strip using a small piece of tape attach a dime about half way between the wire and the end. This will allow you to weigh out fairly small equal amounts of the chemicals.

The scales are used in the following manner. Place something under the scoop to catch any chemicals that might not make it into the scoop. Place your chemical in the scoop until it is just heavy enough to tip the scoop down all the way. This is one proportion that weighs somewhere around half a dime. It doesn't really matter how much as all the formulas are given as parts by weight proportion. Any way you go about it is okay as long as you make sure that the weights are consistent.

Chemicals

CAUTION: ALL OF THE CHEMICALS BEING USED ARE EITHER POISONOUS OR DANGEROUS IN SOME WAY. PLEASE USE SAFETY PRECAUTIONS WHEN HANDLING THEM:

The formulas that are used will only be tested possibly modified versions of ones found in the various sources that have already been mentioned. No formulas will be given that have not been personally tested to ensure some measure of safety and consistency. There are several categories of chemicals that are used. Oxidizers and reducers are the most important as far as the actual burning of compositions. Binders tend to hold the compositions together physically and also have the tendency to moderate the burn rates. Some also have the tendency toward being combustible.

Oxidizers do just what their name implies by providing oxygen to sustain the burning. We will get into more detail on the actual terms at a later time when we start to get into the section on constructing stars and such as that. Some are listed here:

Potassium Nitrate is the oxidizer that is used in Black Powder. It is used in numerous compositions that contain a carbon based reducer. It should be obtained from the chemical supply house.

Potassium Perchlorate is a lot more powerful oxidizer than the nitrate as it contains more oxygen. Like the other chemical compounds made from chloric or perchloric acids it can be rather sensitive in certain circumstances. Such as when mixed with finely divided metals such as aluminum or copper. It also gives up chlorine which helps to deepen the color of your fire. It can be obtained from the supply house. Note that it also is more sensitive to shock when mixed with sulfur and may be set off when struck real hard with a hammer. It is a strong irritant.

If you have an excess of bravery one of the most powerful oxidizers is Potassium Chlorate. If you decide to use it get all the PMJB books and read them from cover to cover many times to make damn sure you know exactly what you are doing. It has a tendency to spontaneously explode when mixed dry with certain things such as sulfur and red phosphorus and should be wetted thoroughly including an antiacid before handling. Thanks for that note Kurt.

Another rather powerful but hazardous oxidizer is readily available as of this writing is Potassium Permanganate. It is generally a purple colored granular substance that grinds up into a reddish purple powder. Be aware that it is very caustic and will burn skin on contact. It is very sensitive when mixed with reducing agents and when mixed with powdered aluminum it is as powerful and maybe even a little stronger than the flash powder described further on in this article.

Barium Nitrate (used for green fire) is a good oxidizer and also helps color the flame green. It also comes from the supply house. Most Barium compounds are poisonous so caution is important. Make sure that you wear your mask and gloves when using this in a well ventilated area.

Strontium Nitrate (used for red fire) colors the flame red and also provides oxygen. If you have access to a 100-200 mesh screen it may be obtained from common road flares. But be aware that most contain binders such as kerosene which could possibly cause problems. It is best to buy it from the supply house. Most Strontium compounds also tend to be hazardous in some way or other. They are usually poisonous and should be treated with caution. They are shock sensitive when mixed with reducing agents.

Ammonium Perchlorate is also a powerful oxidizer that is available and is mainly used in rocket engines. I have not used it yet but have acquired some for testing purposes and will let you know what I find out.

Reducers on the other hand are in the simplest terms what gets burned. I know that some will find that too simple a description but its easy to understand. Some are listed below.

Charcoal can be found at the hardware store but contains a lot of trash in it so it is recommended that you spend the bucks and buy soft charcoal sticks at the art store. These can be ground up real easily and are my first choice.

Powdered Aluminum can be obtained through a chemical supply house or if you're into chemistry made at home, but I bought it. NOTE: Filed aluminum doesn't work well unless it is very fine. Do not use sandpaper to make it small as it will contain many particles from the paper and could taint the quality. Be aware that most finely powdered metals can be explosive when mixed with oxygen. Some also can be toxic in this form.

Zinc Dust is another metal that can be used in the arts. It may be obtained from the supply house in a couple of forms. In bits and pieces, in a powdered form, and in a powdered form called mossy. This means that it was powdered by pouring molten zinc into water. The form I have acquired is the regular powder.

Sulfur has the main job of evenly spreading fire to all parts of the composition in which it is incorporated. It also acts as a reducer by being combustible. It is best obtained from the supply house.

Binders can have multiple purposes when included in some compositions. They hold things together and sometimes act as reducers. These will be described individually.

Shellac is a good binder when wetted with ethyl alcohol. It also is combustible so tends to act as a reducer.

Stearine is a binder and a reducer at the same time. It is sold at the hobby store for use in candles. It is sometimes used in making blue fire.

Another binder is powdered water soluble things such as dextrin but I have as yet been unable to find a source. IF you find one please pass it along. I am in the process of trying a couple of ideas along this line and will let you know what I find.

You will also need a couple of wetting agents to suspend your binding agents so they will be evenly distributed within the compositions. Isopropyl alcohol (rubbing alcohol) is used in certain cases that will be mentioned later. Ethyl alcohol to be used when shellac is being used in a composition. Denatured Alcohol can also be used if it is the kind that has been denatured by methanol only. It should not contain any other denaturants. Water is used when dealing with some of the Nitrate and Perchlorate composition and will be noted at that time. Never mix any Chlorate compositions dry as they tend to go BOOM.

Cannon Fuse can be found at gun shops and gun shows. It may also be found at your better hobby shops that carry model rocketry supplies. Make sure to test the fuses burn rate.

Other chemicals are also needed for special purposes such as Ammonium Chloride which is used as a source of chlorine in the burning to help in deepening the color. It is also used in making a pretty good white smoke. Be aware that it has the tendency to draw moisture from the air.

Mercurous Chloride (Calomel) is also a good chlorine source but be advised that it produces poisonous fumes especially when burning and should be used only where there is extremely good ventilation. It is used primarily in the making of blue and green fire. It does not seem to take up moisture from the air like Ammonium Chloride and is preferred over it. Generally when chlorates or perchlorates are used for an oxidizer there is no need to add any extra chlorine source. This compound in any form is very poisonous.

Black Powder is available at most gun shops that cater to muzzle loading enthusiasts. It comes mainly segregated by grain size. 2F is the size that I have found to be the most useful. It can be carefully ground in small amounts with a porcelain mortar and pestle if the need arises.

I have touched only the tip of the iceberg here so please refer to PMJB for a complete list of what will be needed.

Black Match

Black match is a type of fuse used in certain ground and aerial devices. It is also very cheap and easy to make. You will need cotton twine and some finely ground Black Powder(BP). You will also need some kind of frame to stretch the fuse over to allow it to dry. Take 3 strands of the string and twist together then tie in one side of the frame. Twist the strands then tie tightly to the other side of the frame. Take a shallow container and put some BP in it. Add water 1 drop at a time mixing constantly with a wooden stick. Continue adding water until the BP is a thick paste. While wearing rubber gloves completely saturate the string with this paste. Wipe off any excess and allow to dry completely. This fuse burns at about 1" per second. It can be made to burn very fast by inserting it into a paper tube about 1/4" in diameter. This is called Quick Match and burns faster than you could possibly get away from so be careful when using it. The Black Match is also a lot cheaper than Cannon Fuse and is sufficient for use when testing compositions.

Flash Powder

Flash powder is a mixture of Potassium Perchlorate and the finest powdered Aluminum that can be acquired. 400 mesh works real well. You would be wise to wear a particle mask, face shield and rubber gloves for measuring your chemicals and also welding gloves when mixing them, just in case. Also it would be wise to do so when making devices. Measure 2 parts Perchlorate and 1 part Aluminum. Combine them on a piece of aluminum foil and gently mix together thoroughly with a plastic measuring spoon. Store in a plastic bottle. ** DO NOT STORE IN PLASTIC BAGS ** This composition is not real sensitive to static like Black Powder is but has been set off by static under test conditions so use caution when choosing your containers. This composition if placed in a test cup made from aluminum foil that is 1" in diameter and 3/4" deep to a depth of 1/4" and fired with enough cannon fuse to allow time for departure flashes, makes an audible poof and makes lots of white smoke. If loaded to a depth of about 5/8" you get one helluva boom, a big flash, and enough smoke to be seen from a long way off. The first time that I did this it scared the bejeezes out of me. I was not aware that any of the low order explosives would do this in that small an amount and under those conditions. Obviously I had failed to

take into account the speed in which this stuff burns. When tightly contained it can build up pressure fast. I urge extreme caution when using this composition.

First Device

Now lets start the construction of a small firecracker that is approximately M-80 grade maybe even a little better. Be advised that this device can remove a hand. It is best to place it on the ground standing straight up so that the end plugs won't bean someone on the head or something like that.

Take a thick walled paper tube (fax paper roll or home made) about 5/8" in diameter and 2" long. The walls of the tube should be a least 1/8" thick. Make a wadding with toilet paper (TP) by inserting one wadded up sheet in the tube and packing tightly against a hard surface with a cylinder that will just fit the tube. Eject it from the tube then make another. Insert one of these into the tube leaving 1/4" space between it and the end of the tube. Fill this space with a quick drying two part epoxy cement and let it cure completely. Take a sharp pointed round object and make a hole in the middle of the side of the tube that will fit the fuse very tightly. Insert at the minimum 6 seconds worth of fuse into the hole until it turns toward either end. If you made the hole correctly the fuse should be rather hard to remove. If not use some Elmer's glue around the base of the fuse to hold it in firmly. Once again let it dry completely. Now stand the tube on end and add flash powder until 1/3 of the containers interior is covered.(Another alternative is to fill it completely and pack lightly using the end plug. I am still experimenting to find the right amount so be careful when trying this.) Insert a piece of wadded up TP in the tube and lightly pack just enough to hold the powder together leaving room for the other wadding that you made. Now insert the wadding and epoxy as before once again allowing to dry completely. You now have a device that I hope you enjoy. I put one of these under a 55 gallon plastic trash can that was inverted on concrete and it went 10' into the air. This device throws a very hard wadding so watch out.

Sources

Poor Mans James Bond, Granddad's, & The Survivor available from:
Atlan Formularies
P.O.Box 95
Alpena, AR 72611
(501) 437-2999

Ω

Notes From Ground Zero
by Wildflower

Buying tools can be a real pain if the tool you paid for turns out to fail after a short while, usually at a critical time & place; opening oneself to frustration, possible injury, even death! Too many of today's tools are really mass-produced crap, especially those sold at "bargain prices".

Take for example VISEGRIP (tm) pliers, which have numerous imitations on the open market Now the real Visegrip pliers will last for many years of heavy duty jobbing, while the five dollar copies last only a few hours, if lucky, before failing. Yet despite such failures have seen people just buy another copy tool, rather than the real thing, just to "save money". Sheesh!

Now, not all cheap tools are bad, such as some tools coming out of China which are of good quality at a low price, but buyer beware. This is a rare item nowadays! It's best to compare the quality of the more expensive against its cheaper version to be certain of its quality before wasting your good money.

As for power tools, if can afford to do so buy the "industrial" types, for they are built to last for a long, long time, and are easier to repair and maintain than their more inexpensive versions. HINT: Buy the replacement brush sets and replacement bearings within the same year of purchase of the power tool for easier servicing later.

LAST: Do remember to wear appropriate goggles, gloves, ear protection, etc.; as no one has perfected spare eyes, ear drums, and fingers for the first aid kit yet! Only a fool refuses, until they are a dead fool. Such protection is easy to use anytime and anywhere!

THE POCKET PORTABLE SHOP: Recently acquired the RECHARGABLE DREMEL CORDLESS ROTARY TOLL ("MINIMITE": MODEL 750) which uses a rechargable power pack (recharges in 3 hours). With a dual speed of 5000 RPM (Slow)/10,000 RMP (Fast); this tool can utilize most of the various minibits to carve, shape, drill, cut, etc. light wood to light metals. (COST: about $30 (spare pack $20) at most hobby shops)

The MINIMITE, with spare pack and recharger can fit an M-65 coat pocket; along with a small variety of minibits. Ideal for many "in the field" jobs as well as at home. Also makes a great "beginners" tool for many "first workshops"

For better "UMP!"; consider one of the more powerful DREMEL ROTARY TOOLS, which can be used in the field if powered by an inverter off your 12V battery pack or system. Also of note is the saw, flexible tool shaft, and even drill press adapters for your DREMEL TOOL.

The PARASOL BUTANE TOOL : (Sold at Radio Shack) can be recharged with fresh butane at home or in the field, comes with interchangable tips for: SOLDERING, HOT KNIFE, TORCH, or even a HOT BLOWER for softening plastics or peeling hard paints. Comes equipped with a cap containing a flint igniter. This portable tool is most useful at remote sites that have no power outlets for conventionally powered soldering irons, etc. *NOTE* This tool may clog up on cheap butane refillers, also tends to wear out fast, especially on "most used" tips.

VISEGRIP BRAND TOOLS: Avoid initations, for few ever last as long as the real thing! The real thing, from the mini 4WR Visegrip pliers to the other types including clamps and pipe wrenches; may damn well cost more than the imitation copy, but will never fail on the most critical job, like so many imitations have done so. *NOTE* The small 4 to 5 WR Visegrip pliers are not only excellent pocket tools, but can also serve as "adjustable thumbscrews", even for emergency dentistry; as in pulling teeth! For most field kits, buy two of each size.

As unusual weather keeps occuring, do be certain to establish a cache of canned foods now, as uncertain of national production which may drop this year as additional extremes/dangerous stroms/drought take their toll on the nation's food production areas. Even a can of beans is far better fare than a floppy disk any day! Also far cheaper to buy know, than if food becomes short. Prices will definitely rise quickly, amking that can of beans cost more than a brand new 486 chip, if not the entire board.

Also consider other prices to rise on medicine, clothing, ammo, ectra. Gold and silver may buy even less than what you can buy it with later on. So, why be caught "short"? Also such items can command even higher "barter trade value" later on, comprehendee?

During the last big way (WW II), savvy people buried extra fuel in one gallon cans under their rose bushes, even under their flower beds! Consider at least 10 gallons of auto fuel concealed underground nearby for "emergency travel needs" as a wise investment. Consider burial in two to five gallon plastic fuel containers, with fuel stabilizer added, under your rose bush! If you really got room, consider a plastic 55 gallon drum or two under that old rose bush, especially if you're going to stay.

Now past the fall of it all, one could tap gas station fuel tanks for fuel, especially if one has a manual operated diaphram water pump from a sailboat. These pumps can even pick up the last few inches of fuel left at the bottom of the fuel tank (do filter afterwards). Another option is those electric auto fuel pumps that mount directly into a fuel tank, but take care to seal all completely against accidental spark ignition of tank fumes.

Also, don't forget to check abandoned cars and trucks for fuel, as many still have a filterable gallon or two left in their tanks for salvage (even if gauge reads empty). The easiest way to recover such fuel is to crawl under and penetrate tank with a sharp awl & mallet, but be damn careful not to generate sparks while doing so. Far better to siphon with a hose connected to an electric or manual fuel pump. If auto is compatable to yours, take the time to strip useful parts; including usable tires, working lights, generator and battery. or at least notre location on map for later salvaging when possible.

Any automobile is a "treasure chest" of reusable materials for the home shop to utilize. No doubt as one's new local civilization starts to rise, even garbage dumps will be mined for useful metals, wood, plastics, etc.; rather than trying to find natural raw materials elsewhere. And be damn certain, most products exchanged, will be rebuilt or newly manufcatured to be "rerpairable, recyclable, reusable" instead of the more traditional "use it once & discard" mentality of now!

As for lifestyles, one will not be so easy to escape by using the automobile to distance oneself between work & home. People will have to realistically deal with each other, or face real expulsion, for such beliefs as racist, sexist, even moral; from their community. In other words "GET ALONG OR GET OUT!", and for those who believe in murder, rape or even violence, live damn short times when caught in any community about.

BASICLY: One has to be prepared to be "the meanest S.O.B." so that one could "live long at peace"; while tolerating each other, and giving those who want peace the means to do so. Otherwise one will be exploited, raped, and killed by the most sadistical bunch of bastards about, for they can only tolerate you as dead, period!

Checklist For Survival

1) Stay in good shape and stay healthy.

2) Have lots of friends.

3) Have a good solid house or building to live in, possibly even for future generations to add to; with good solid construction of thick walls and roof, along with access to good well water from inside; be able to withstand local hordes of shitheads.

4) Good land, or nearby access to; for food production.

5) Good water well or good storage of water, along with good filters.

6) A very good, extra large capacity sewage storage tank or leech field, constructed away from contaminating possible safe water areas.

7) A shop equipped with good hand tools.

8) Kitchen with hand powered grinders, wood stove, icebox, manual can opener, etc.

9) Alternative means of power and fuel production in use, or in storage awaiting future needs.

10) A good multiband radio and CB radio.

11) If armed with firearms, reloader and supplies.

12) A good first aid to surgicalkit, with extra supplies.

13) A good reference library of books.

14) A good "mountrail" bicycle, spare tires and parts.

15) A good inflatable raft, small boat, or "daysailor" sail boat (with a small gas outboard with extra fuel & spare parts)

16) Extra seeds, fertilizer, also a good soil test kit.

17) Good kerosene lanterns& extra wicks & fuel.

18) Have already established a one to five year "use and replace" rotational supply of clothing, foods, medicines, etc. In case of a real emergency, this becomes your "reserves" until replacements can be found or grown, which could be a very long time 'til so!

19) Impossible to store everything,so store what cannot be easily made to combine later with what can. For example: transistors vs. a radio coil.

20) A good sense of humor, a good ability to make do with what one has and to do without one has not, a good solid belief in no matter what comes, you can deal with it one day at a time.

Live Long & Free!
Wildflower*95

Ω

The Riddle Of Steel
by Jim Teff
The Value Of Lo-Tek

In a survival/guerrilla warfare/self-sufficient situation ammo and parts will be in short supply and difficult to come by. Lo-tek tools and weapons like those used by pioneers, mountain men and primitive tribes are easily maintained, repaired or replaced. Most require no ammo or use ammo provided by nature (slings use stones, atlatls use sticks, etc.). They also have the advantage of silence with and are great psychological weapons (Good God, he has a battleaxe!)

I am not saying you should abandon modern weapons, tools and technology; only to conserve it and not become totally dependent on it. Lo-tek is cost effective. Use it to supplement your system. The Vietcong, for example, made extensive use of blowguns, spears, crossbows, knives, and primitive boobytraps with devastating effect. Before you buy expensive gear that the "survival experts" tell you that you can't survive without, think about what you already have which will perform the given function. There are many pieces of equipment you can make for yourself, many things around the house which can be pressed into service or adapted to the cause. These are but a few things you should consider:

Trash bags and zip-lock bags protect supplies and equipment.

Empty dishwashing liquid bottles make excellent bota canteens.

Cut off legs from old jeans can be made into possibles bags.

Product Reviews

China Hunter - Model XL 144, Manufacturer - Tomahawk, Made in China, Price $2.49
Another fantastic bargain from Smoky Mountain Knife Works! This one is a quality stainless steel 6" blade hunting knife with a leather ring (a la Ka-Bar) and mock stag grips, brass guard and aluminum pommel which will take and hold a good edge and perform all the functions a utility blade should. At $2.49 each ($2.25 if you buy six or more) you should keep a few as spares.

Zulu Assegai Spear, Manufacturer - Cold Steel, Made in USA, Price - $24.99, sheath - $7.99
There are places near my suburban home where deer will walk right up to you while you are fishing. This spear would be just the ticket for hunting from a tree stand or blind. I recommend replacing the short shaft provided with on 5' - 7' for greater accuracy, weight and penetration. Do not throw at hard targets like trees if you do this. The blade may not stand up well to this sort of punishment. With short or long shaft this is an excellent close combat weapon capable of penetrating body armor.

Parsu Double Axe, manufacturer - Unknown, Made in Pakistan, Price - $14.99
Four styles of battleaxe are available from S.M.K.W.:

Mughal Axe - 39" overall - Price $18.99	Punjabi Balla Axe - 32" overall - Price $18.99
Parsu Double Axe - 30" overall - Price $14.99	Bhims Big Axe - 29" overall - Price $14.99

I purchased the Parsu expecting a decorator only and was pleased to find it could be used as a practical close combat weapon. The top spike is a little flimsy so I replaced it with a 38" bolt. The head is held on by three small brads which I removed, drilled out the holes and replaced with wood screws. If the shaft breaks it can be easily replaced with a broomstick or sapling. This exotic barbarian weapon is capable of downing an opponent with a single blow. All of the above are available from:

Smoky Mountain Knife Works
P.O. Box 4430
Sevierville, TN 37864
1-800-251-9306

Equipment Checklist

Tools For Living Off The Land

The tools/weapons listed here are basic, multi-purpose hand tools. They are inexpensive, easily obtained and cost-effective to operate. With them you can live a primitive existence in style. Use these tools to make others, build shelter, gather food and cook.

Machete Tomahawk	Hunting/utility Knife	Axe	Folding buck saw Folding pruning saw
Multi-tool (ie Leatherman)	Entrenching tool	Brace and bits	Hand drill	Sharpening stone

Hunting/Fishing Gear

Telescoping or takedown rod and reel	Tackle box with asst. lures, hooks, sinkers, bobbers, etc.
Fillet knife	Trot lines
Snares (optional - traps)	Slingshot and shot
Sling (make)	Fish gigs

Cooking Gear

Wok (you can cook almost anything with this)	Cast iron deep skillet with lid (doubles as dutch oven)
Coffee pot (also used to boil water for other purposes)	BBQ fork, spatula, spoon, tongs, ladle
Ginsu knife	Messkit
Canteens (improvise)	

$$\Omega$$

Militia Training: Operation WitWeb

Preparing for last war

Most of the kinds of tactical training that militia units across the country have been doing have been focused on the tactical situations found in conventional or counterinsurgency warfare. And most of the alert systems that have been set up depend on telephone communications. While such exercises have some merit, they neglect the kinds of scenarios that we are more likely to face. This document describes in a general way a different kind of exercise designed to prepare militiamen for more likely scenarios, emphasizing reconnaissance, intelligence, and insurgency methods.

We call this kind of exercise WitWeb because it sets up a webwork of witnesses. Think of ourselves as a spider, spinning of web to catch some flies. In this case, the flies are corrupt or abusive officials or other criminals. Our objective is to gather and distribute evidence, protect witnesses, investigators, and other innocent persons, and bring the perpetrators to justice.

Elements of Operation WitWeb

(1) The operation should take place over a definite period of time, such as from Friday to Sunday evening.
(2) Participants would operate singly or in teams of not more than three persons.
(3) Each participant would initially receive an assignment to go to a specified location at a specified time.
(4) At each location he would either perform some action and go to another location, pick up further instructions from a dead drop, or rendezvous with another participant, exchange recognition signs, and exchange items or further instructions.
(5) Each participant would hit multiple locations during the course of the exercise, and would log the travel times, distances, and any other pertinent information about each leg of the journey.
(6) At the end, each participant would report to a task leader, who would receive his report and any items he was to deliver.
(7) One of the activities would be to reconnoiter a target site, find an observation point from which it could be surreptitiously observed, if any, and if found, describe the observation point to another participant, who would attempt to observe from that site for some period of time, while a third participant would observe his observation to determine how well he was concealing his observation.
(8) Another activity would be to videotape a target, with the date/time record feature on, then rapidly exchange the good tape for a blank and hand off the good tape to one or more couriers who would escape the scene rapidly and in different directions, deliver the tape to a location where it would be duplicated, then execute a simulated delivery of the duplicates to key persons, to hiding sites, or to media contacts
(9) Among the observation targets would be the homes of activists, the homes of straight government agents who might be the targets of actions intended to discredit the militia, mobilization points of enemy forces, or other locations at which some event of interest seems likely to occur.

(10) Each participant would have a way to alert the others in the event of trouble at a site requiring either convergence or dispersal, indicating whether convergence should be equipped to observe or to take protective actions.

(11) One activity would be to simply spread an alert message to all the militiamen in the area as rapidly as possible without using electronic media. The methods could include voice relay, coded written messages, or hand or light signals.

(12) Another activity would be to code and/or decode messages as rapidly as possible, using both technical implements, such as computers, and non-technical, such as one-time written keys.

(13) The exercise might be supplemented by recruiting persons who regularly live and work in the target areas to be alert and prepared to observe, preferably with video cameras, in which case they would be provided with a way to alert the militia to come pick up the video tape as soon as possible after it was taken, and provide a blank tape as a replacement.

(14) The list of observation targets would be continually revised and expanded, and observations made on a random basis, so that no one, not even most of the militiamen, could be sure when any given observation might be made, but also so that no one could be sure that any given target would not be observed during any given period of time.

(15) Video cameras would be supplemented with still cameras using high-resolution film, to get detail that video can't.

(16) Observers would make lists of relevant things in the area, such as vehicles and their license plates, so that statistics could be compiled and parties of interest identified. Of particular interest would be unassigned license numbers.

(17) One activity would be to collect trash from important sites for analysis.

(18) One type of target would be storage sites and vehicles transporting illegal drugs or other dangerous contraband, with special emphasis on identifying official involvement, so that when reported to authorities the militia would not be reporting it to the same authorities involved in making the shipments.

(19) One type of activity might be the actual interception of drug shipments, combined with the destruction of most of the drugs so that they could not be diverted by officials back onto the street, but leaving enough for use as evidence in court.

(20) Another type of activity might be the observation, in relays, of the movement of election ballots, from initial production to final counting, to identify election fraud. This might involve the use of hidden cameras, including the transmission of video to a receiver who could preserve the evidence in case the on-site observer got caught with the camera.

(21) Lacking more dramatic targets, participants might practice observing lesser instances of malfeasance, such as noncompliance with legal or contractual standards for construction, environmental protection, medical procedures, or other activities which are liable to occur in the absence of witnesses.

Working with other resources

These exercises are likely to turn into serious operations involving real corruption and abuse. Therefore, it is important to line up other resources that may be important:

(1) Straight law enforcement agents. But contact should probably be with individuals rather than with departments, which may contain dirty agents.

(2) Straight reporters. Again, contact should be with individuals who have proven their willingness to take personal risks to expose the truth.

(3) Straight elected officials. In most cases, the official himself may be too busy, but one should be in contact with a key staff person.

(4) Media messaging systems. One should prepare in advance to disseminate important information to the media generally, especially key persons with talk radio and TV stations, newspapers, and mudraking magazines. This should include a computer set up to email or fax to multiple targets. Messages should always be directed to specific individuals, with a backup if the first one is out.

Things to keep in mind

(1) Participants in this exercise should remain as inconspicuous as possible.

(2) Participants should remain mobile so that they do not themselves become easy targets for attack or apprehension.

(3) There should be preparations for any participant who learns "too much" to go underground while preserving the evidence, with everything needed, such as money, ID, a cellular phone or ham radio, a vehicle with plates not linked to him, or disguises, to remain underground for an extended period of time, while preserving the ability to maintain necessary contact.

Militia Organizing: Advance Teams

Breadth of Organization

One of the most important missions of activated militia units is to organize units in other counties throughout the state, and even in other states. While it is important to involve as many people as possible in each county, down to the neighborhood level, it is also important to achieve geographic spread, so that no county of any state is without at least one unit. A certain number of active members of each unit should be designated to this mission, which involves the following suggested elements.

Elements of Advance Organization

[ ] Form 2-3 person teams. It is possible to work with more or less, but for various reasons, this seems to be an optimal number. One of them provides the vehicle.

[ ] Prepare target list of counties. Start with a list of all counties that do not yet have a known activated militia unit. Arrange the list in descending order of priority, based on factors such as population size, proximity to major highways, location in districts of important legislators, or proximity to important sites of other kinds. More populous counties will have more potential recruits living closer together, which will make it easier for them to meet and work together. Proximity to major highways is to try to get unbroken chains of units connecting major population centers, which may be important for communications and logistics. In Texas an important county would be McLennan, because it contains Waco and the site of the Davidian Massacre, where the populace needs to be activated to get a grand jury to bring indictments of the persons responsible for that atrocity.

[ ] Divide the target list among the advance teams. Some consideration should be given to familiarity of the team members with the counties and their inhabitants.

[ ] Get lists of patriots and persons inquiring about militia involvement. Such lists can be acquired from various sources, such as some of the more publicized militias of other states, subscription lists for various patriotic publications, and participants in various patriotic activities.

[ ] Mail literature to any prospects in the target counties. Such literature should contain two things: a message which arouses the reader to take action, and information on what actions he or she can take. The first might consist of tales of official corruption and abuse. The second of how to activate a local militia and contact those already activated. Ask them to respond in some certain number of days, such as seven.

[ ] Send more literature to those who respond. This may be enough to get them to activate a militia unit in their county.

[ ] Follow up on mailing targets, both those who don't respond and those who do, with phone calls. Qualify them for their level of interest, their concerns, their resources, and their intentions.

[ ] Schedule visits to each targeted county by its designated team. Let any prospects know you are coming, and try to arrange to meet with them. If there are no prospects, then go in cold and scout for some.

[ ] The team should visit likely places and persons who might refer them to prospective recruits. Gun shops, American Legion and VFW halls, civic organizations, sheriff and fire departments. Ask for the names and phone numbers of persons who have expressed concern about the threats to our rights under the Constitution.

[ ] Follow up on the leads. If the person seems interested in getting involved, leave him some literature and a phone number for the team. Compile a list of prospects, discuss the members of the list with each other to identify prospective leaders and potential conflicts. Suggest that those interested get together, and try to get them to commit to a place and time, then inform all the others.

[ ] Publicize the organizing meeting. Put a notice in the local newspaper, if there is time, and call in to any talk radio station that serves the area to announce the date, time, and place of the organizing meeting, and a contact phone number for details. This should be an easily remembered name in an easily remembered city, so that the person can call information if they don't take down the phone number.

[ ] Send literature packages to prospective attendees. To the extent possible, try to have them all come with a common foundation of understanding of the basic ideas, and with such things as proposed by-laws, so that they will not have to waste time at the meeting reading new materials.

[ ] Have the team present at the organizing meeting. Provide a speech which motivates and explains the key ideas. Have the attendees introduce themselves to each other, and perhaps explain their experiences and concerns. Hand out literature to any who did not previously receive such.

[ ] If the attendees are ready to do so, have them adopt the by-laws, elect a commander, and agree on the date, time, and place for the next meeting. Appoint persons to seek more permanent meeting places, handle publicity, reach out for more participants, and establish training and study groups on various topics. Make sure everyone who needs to contact one another gets each others' names and phone numbers.

[ ] Have the team present at the second meeting. If by-laws were not adopted and a commander and other officers elected at the first meeting, get them to do so at the second meeting. Also get them to form task groups on various subjects: military training, disaster control, legal issues, logistics, communications, public information, recruitment, site arrangements, and security.

[ ] Leave them alone for a couple of months. Let them work out their own problems for a while, without guidance from outsiders, other than newsletters, reports, and other communications from correspondence committees.

[ ] Do a follow up visit. See how they are doing. Try to help them overcome any problems that may have developed, but don't help too much. The best approach is to ask them questions and let them find their own answers.

[ ] Try to get them to organize their own advance teams. Have them coordinate with other active units to divide the target counties among them and do the same thing that was done with them.

[ ] Try to get all the counties to work toward synchronized events. Militia Day April 19. Independence Day July 4. Election day. Visits by elected officials. Special fiestas and holidays, parades, and political events.

[ ] Assemble multiple teams to organize the last remaining counties. Get teams from several neighboring counties to converge on those that remain to be activated, until every one has at least one active militia unit.

[ ] Engage law-enforcement supporters to recruit their colleagues in targeted counties. If you have the support of a sheriff or constable in one county, get him to visit, or at least call, his counterpart in the targeted county, and ask him to attend militia meetings and learn about the movement.

[ ] Likewise, engage media people, public officials, and civic leaders. Often such people are more influenced by their counterparts from other counties than by their own neighbors. Take advantage of these chains of influence.

[ ] Keep the free media flowing. Issue a steady stream of press releases, notices of meetings, statements on constitutional issues, and important events, including legislation and official acts that may impact on the militia movement. Get people interviewed on talk radio stations, and call in to them regularly with succinct messages on some point that needs to be more widely understood and discussed.

[ ] Organize letter-writing parties. Get everyone together and have them write letters to legislators, the governor, congressmen, the president, editors, or whoever needs attention. Use models of well-written letters that got responses or that got published. Make sure they don't all read alike. Offer recognition to the best ones. Make sure they are signed, stamped, and sealed before everyone leaves, and make sure they get mailed.

[ ] Organize state-wide alert system. Make sure there are at least three persons in each county who can serve as points of contact for alerts, to verify rumors, and to check on the condition of activists.

[ ] Extend this effort into other states. But be careful not to offend existing militia leaders in those states. Send literature, but avoid going in without conferring with any established state leaders, and without an invitation from the people in the target county.

[ ] Extend the alert system to other states. Make sure every active militiaman in any county of any state can find and contact someone in any given county of any other state.

[ ] Establish wireless communications links. Make sure there is an unbroken series of reliable repeaters for ham packet links between any two militia units in the country. Test it frequently.

For more information contact:
Constitution Society
6900 San Pedro #147-230, San Antonio, TX 78216
210-224-2868

Ω

Urban Survival, Part I
by Douglas P. Bell

To start with, let's get over the idea that all survivalists are going to get out of "the city" in time to set up a "survival retreat". Not all survivalists are going to have the money, time or inclination to leave the city life and move to the middle of nowhere. First off, leaving your job and having no money will doom you faster than anything you can think of! Also some of us just enjoy the city lifestyle and do not enjoy the bucolic life. So the problem remains, what are the urban survivalists to do?

Let's start with shelter. Most of us live in either single family homes or apartments and if you rent your house or apartment that limits what you can and can not do there. After all, it would do little good if you were to set up a fully equipped nuclear bomb shelter in the basement and got thrown out the following week!

However, this does not mean you are totally at the mercy of the landlord and the elements. First off, try talking to your landlord about survivalism, or just feel them out about their ideas of the future. This might include nuclear war, depression, gov't control over their life, etc. If done carefully, many people who would otherwise think of you as a fool or nut case will come around very nicely. If not, well you aren't out anything.

If you live in one of the impersonal high-rise apartment buildings, and they have nothing to do with you outside of getting your rent check, you might try and find out where the chimney and venting pipes are and if you are near enough you can tap into them for your heat and air without anyone knowing. If the heat supply was cut off for some reason, you could put in a small wood/oil burning stove, vent it right out the chimney, and no one would know it was you.

For a water supply, you could use 2 liter pop bottles or plastic gallon milk jugs. If you happen to live in an apartment building with a gravity fed water system, that is the water supply is on the roof, during bad times you could simply go up on the roof, shut the valves off, and tell everyone the water supply ran out. No matter what you do, it would not hurt to have a good supply of water stored just in case.

As to food, a years supply of freeze dried, air dried and canned goods can be stored in a closet; so space, if you really want it, should not be a big problem. Normally there is a lot of "dead" space to be found, under tables, beds, dressers, desks, etc., so that you should be able to store a goodly amount of stuff away where it will be out of sight, or at least out of the way.

For cooking that food a wood stove will work just fine; although camp stoves, such as the Coleman, are also small, reasonably light weight and easy to use. Remember however that burning anything will use up your Oxygen, so have an outside air supply coming in. This is especially true of charcoal stoves or grills. Used in an enclosed area it will simply put you to sleep, for good! Also beware of treated wood or plastics that will give off toxic fumes, so you don't poison yourself.

Now I know you've been waiting for this, so we will now talk about guns. What exactly you need is not easily done from long distance, although there are a few basic things that most people can agree on. In urban fighting, distances are not likely to be long, a few hundred yards at most, so you don't need a full power battle rifle capable of shooting 1000 yards and through several walls. Also depending on where you are, you may not be able to legally own handguns or "assault" style weapons.

All is not lost however. A short barreled lever action rifle, such as the Winchester 94 "Trapper" model, Marlin 336, 1894 or Rossie M92 is not likely to send the neighbors into fits of rage as would a H&K 91 or 94. The SKS in 7.62x39 is in about the same power range as the .30-30 and is extremely cheap right now (in the $100-$140 range, although this is always going up), as is the ammo, so you might consider it as well. The Marlin "Camp" guns in either 9mm Luger or .45 ACP would also make good "house" guns, although the range out of the short barrels or in the pistol calibers would be limited.

That's not all bad however, as a city in break down is likely to have roving bands of gangs or even National Guard units (remember after Hurricane Hugo when the Guard units joined in the looting?) that are better armed and/or more willing to use their weapons than you. So the less shooting you do, the less attention you will attract to yourself.

For close range firepower or "street sweeping" it is hard to beat a shotgun. A discount house here (and many gunshows) often have the Remington 870 Express model with a rifle slug barrel and a vent rib "Rem-Choke" (interchangeable screw in choke) barrel for under $300.00, which has to be one of the great bargains in the firearms field. The only down side of this gun is it is only available in 12 gauge, and many smaller or less experienced shooters might prefer 20 gauge, although regular 870s are available in just about any gauge you could want.

Other shotguns you might also want to look at are the Winchester 1200/1300 or Ranger models as well as the Mossberg 500, especially the Bullpup model that moves the action back just in front of the recoil pad and gives the gun an overall length of under 30" with an 18" barrel or just over 30" with a 20" barrel. Get the longer 20" barrel as the added few inches will dampen the recoil and especially the noise or blast when compared to an 18" barrel.

For left handed shooters or others who don't want the shells ejected from the side for some reason, the Ithaca 37 (or Model 87 as it is currently called) and Browning BPS ejects the shells out the bottom, so the shells land at your feet instead of flinging past the left handers' face. Remington also makes a left handed 870 if you would want one.

As to handguns, the police departments of many cities are turning in their revolvers for 9mm automatics. This has placed a goodly number of revolvers in either .38 Special or .357 Magnum on the market at very reasonable prices. Many of these guns will have holster wear, that is the bluing of the gun will be worn, but this will in no way affect how the gun shoots.

If possible, get the .357 Magnum over the same model in .38 Special (such as the S&W Model 10 in .38 Special and the same thing in .357 called the Model 13) and adjustable sights if offered. The .357 Magnum can shoot .38 Specials just fine, and this gives you the choice of two different cartridges (.38 Special and .357 Magnum) rather than just one (.38 Special), as well as being able to sight in for the different loads.

$$\Omega$$

Thoughts From The Interzone...

I've been getting a lot of questions about our BBSes. We currently have four (with more being planned) BBS systems available for Cybertek support and feedback. The first one is on the internet at l0pht.com. To get in, just simply enter "BBS" at the user prompt, and follow the directions. Let the SYSOP, Brian Oblivion, know you're a Cybertek subscriber. The L0pht also holds a Cybertek FTP and WWW site at ftp.l0pht.com and http://www.l0pht.com/ respectively. We expect to have more sites up in the future. The rest are phone BBS, **The Runestone, 860-832-8441, new user password: Cyberdeck; Digital Underground, 203-281-1265, and The Toll Center, 718-445-5019.** These are private systems that the SYSOPs let us have some space on. For those of you without modems, we now also have a VMB up and running at 860-225-1625 (1OCL) where you can leave voice and FAX feedback to writers and request info. Writers' box numbers will be listed in the masthead.

Cybertek has gone quarterly. I unfortunately had to do this as running it bimonthly was becoming a big drain on my time and finances. Subscribers will still get the number of issues they paid for (six). It's just that the subscription will run a year and a half, instead of a year. If things improve in those two areas, I'll take it back to a bimonthly schedule.

Those of you wanting to talk with other subscribers and technomancers can now jump on our IRC channel, #Cybertek. We hope this'll provide a place on IRC where anyone can go and have a meaningful technical discussion. Many thanks go to Fencer for his help with this.

Finally, if you are going to be moving, please notify us of your change of address if you still want to receive your subscription. We've gotten quite a few envelopes back from past mailings as a result of this. If you've moved, please take the time to send us off a quick postcard with your new address.

As always, if anyone ever has any questions, comments, suggestions, or whatever I can be reached either via the VMB system at **860-225-1625, Box 6426** (If I'm around and hear your message, I'll pick up.), through email via ticom@connix.com or (when I'm on it) on our IRC channel. -Tom

Cybertek Mourns Loss of Staff Member
Paul "Bleach" Keniry, 1979-1995

It is with great sadness and deep regret that we must announce the passing away of a fellow Cybertek staff member, brother cyberpunk, and close friend Paul D. "Bleach" Keniry. Paul, 16, was declared dead at 12:30 PM Saturday, November 4, 1995 at St. Francis Hospital in Hartford, CT. He died from massive head and internal injuries received in a vehicle accident which occurred the previous Friday. Paul was a writer and editorial staff member for Cybertek. Paul was intelligent, quick to learn, and quick to lend a hand and help others when needed. He will be missed by many in the community.

Cybertek: The Cyberpunk Technical Journal

Classifieds