HACKING

The following section introduces you to hacking in Interface Zero and gives you all the tools you need to hack anything you can imagine.

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Computer Interfaces
The most common computers in 2095 do not use keyboards, mice, etc. The TAP's Hyper Reality interface and Line of Sight Triggers handle things like typing via voice-to-text, scrolling through content, opening new hyper panels (think web browser windows/tabs, etc.), and generally interacting with Hyper Objects and things of that nature. Your Personal Area Network determines the broadcasting range of your Tendril Access Processor and limits what you can access at any given point in time. The newest operating system for the TAP is Hyper Panels 3.7.
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HACKING A COMPUTER SYSTEM OR DEVICE

To hack a computer system or device, the character must succeed on a Hacking skill roll modified by the target's Intrusion Defense System modifier. If the character succeeds, she gains access. Hackers can also make use of programs to access and manipulate computer systems. To accomplish this, the character makes a Hacking skill roll modified by the tier of the Intrusion Defense System protecting the target system or device.

If the hacker succeeds, the program runs on the system and the target suffers the effects of the program. For more information on computer systems and devices, see page @@. Additionally, the character has access to the system and may perform additional actions or launch programs while connected to it. See Hacker Actions on page @@.

Example A: Luciferion wants to hack an opponent's Tendril Access Processor. He fires up his ICEpick program and launches an attack. The IDS of his opponent is 3, which imposes a -2 penalty to hacking attempts, but the ICEpick program grants a +1 bonus to Hacking skill rolls when attempting to gain access to a system, so Luciferion needs to score higher than 5 to gain access. He has a d8 Hacking skill and scores a total of 6 after modifiers are applied. Luciferion has successfully gained access to his opponent's Tendril Access Processor.

HACKING A NETWORK

Hacking a network is slightly different than hacking a computer system or device. To successfully hack into a network, the character must complete a Dramatic Task as described in Savage Worlds. If the character succeeds, she has access to the entire network and anything or anyone connected to it. If the character launches malware, it can potentially affect the entire network, and anyone connected to it. See Access on page @@ for more information on actions characters can perform when they successfully hack into a network. Only Sprites can make Support rolls to aid the character in a Dramatic Task.

Optional Rule: Counter Hacking as a Complication: In Savage Worlds, if you draw a Club during a Dramatic Task, a complication happens. Generally, what happens is open to interpretation and the results of a failed roll are narrow in scope. In Interface Zero, however we want to add an element of danger to a Dramatic Task involving a hack on a network.

If a character draws a Club during a Dramatic Task, have the computer system's Intrusion Defense System make a Notice roll if the character fails a Hacking roll. If the Notice roll is successful, the IDS launches Intrusion Countermeasures to stop the character. The options available to IDS include Force Booting the character, launching malware, and tracing the character's location See the Hacked! section on page@@ for more information. If the counter hack is successful, apply the appropriate effects to the character and continue along with the Dramatic Task (if possible) until it is resolved one way or the other.

ACCESS

Once your character has gained access to a computer system, she can perform the following actions. If the character fails a skill check, the system gets to make a Notice roll to see if it detects the character's presence in the system. If the system succeeds, it may respond accordingly. See Hacked! on page @@ for more information.

Access system devices: The character may access any device linked to the system. This includes certain types of Cybertech implants (See the Computer System and Devices Table for more information). If the device can be controlled, the character may attempt to operate it by making the appropriate skill roll.

For example, if security cameras are linked to the system, the character can view the area they cover and make a Notice roll to spot things. If weapon systems are linked to a computer system, the character may fire them by making a Shooting roll. Note that characters may not fire a smart weapon linked to an Extra or Wild Card's TAP, though they may eject clips and unlink the weapon from the TAP. Some devices require a dramatic task to access and manipulate in some fashion. This can be changed to a standard Hacking skill roll at the GM's discretion.

Attack the system: If the character has malware, she can upload it to the system and attempt to damage it. See Damaging a System on page @@ for more information.

Manipulate the system: Characters can manipulate the system in the following ways:

- **Create a backdoor**: Characters can create a back door in a computer system by making a Hacking roll modified by the tier of the system's IDS. Success gives the character unfettered access to the system for 24 hours. The character must still make appropriate skill checks to perform other actions within the system.
- **Datamine:** Characters can make a Research roll to scan the system for specific files and other, similar types of data. This data may be downloaded/replaced or edited as an action. The time it takes to datamine is equal to one round plus a number of rounds equal to the tier of the computer system.
- **Disable a device:** Characters can disable any device linked to the system with a successful Hacking skill check. If the device is a cyberlimb, eye implant or other sensory-affecting device, the character must make a Hacking VS Smarts Test. If successful, any benefits provided by the device are lost, but not the most basic functions; a person with a cyber eye which provides enhanced vision will lose the benefits of the enhanced vision, but she can still see normally. Characters with ability-enhancing cyberlimbs lose the benefit of the limb, but can still walk, jump, throw a punch, etc.
- **Delete a program:** As an Action, characters can delete a program running on a computer system by making a Hacking(programming) skill check modified by the rating of the program. If successful, the program is deleted, and its effects are stopped.
- **Edit a file or device:** Characters can edit a file or linked device by making a Hacking (Programming) skill check. The time it takes to datamine is equal to one round plus a number of rounds equal to the tier of the computer system.
- **Log GISP:** Characters may log the Geographic Information System Protocol (GISP) address of a Tendril Access Processor or computer system to which they have access by making a Hacking (Programming) skill check, modified by the tier of the IDS protecting the system. A success grants the character a +1 bonus to Dramatic Task rolls to find the user. A raise grants a single free reroll on the Dramatic Task.

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The best use of a back door?
Back doors are especially useful tools to quickly get in and out of a system without detection. The question is, when is the best time to use them? In a combat situation where everything is happening really fast, spending an Action to create a back door into a TAP or a weapon system is a waste of precious time. Your character will likely only be dealing with that computer system once and it makes more sense for her to do other things more critical to the situation at hand.

If you are performing a hack into a larger system like a corporate mainframe, or hacking into a large defense network, then it makes more sense. Having to go through multiple Dramatic Tasks to access the same network makes things needlessly complex.
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HACKED!

If a character's Tendril Access Processor or system she is monitoring (including other people's TAPs) has been hacked, the character may spend an action to respond in a number of ways:

1. **Counter hack:** If a character has the Hacking skill or a Sprite, they may attempt to counter hack the intruder. The types of counter hacking are as follows:
    - **Force Boot**: As an action, the character or Sprite may make an Opposed Hacking roll against the intruder. If the character is successful, the intruder is locked out of the system.
    - **Launch Malware**: Instead of force booting the intruder, the character can choose to upload malware to the intruder's system. Make a Hacking roll modified by the IDS of the target of the attack. If successful, the malware launches, and the target suffers the effects. See programs on page @@ for more information.
    - **Trace GISP:** If the character wishes to trace the location of someone, you must do so by succeeding on a Dramatic Task using your Research skill. The IDS of the GISP address she is trying to trace determines the task rating of the Dramatic Task. See the Trace Difficulties Table to find the complexity of the Dramatic Task. Hacking skill rolls to trace a GISP address impose normal penalties based on the tier of the Intrusion Defense System. If the character succeeds, she has successfully traced the target's location.
2. **Delete Malware:** If the intruder launched malware on the character's system or a system they are monitoring, they may spend an action and attempt to remove the malware by making a Hacking roll at a penalty equal to the rating of the malware (between -1 and -5. See programs on page @@ for more information). If successful, the malware has been deleted and the character no longer suffers the effects of the malware. If the character fails, the malware remains on the system.
3. **Reboot:** The character may choose to shut down her system and reboot it. Rebooting logs any intruders out of the system and takes an action to accomplish. Anyone logged into a system during reboot becomes Distracted unless they succeed at a Spirit check. If the system is their own TAP, then the character is automatically Shaken as well.

Trace Difficulties Table			
IDS Rating	Task rating	Task tokens	Max rounds
1-2	Challenging	4	3
3-4	Difficult	6	4
5	Complex	8	5

OTHER ACTIONS

Some hacking actions do not require a character to be logged into a computer system. Any programs or applications they have can also be used to assist in the operation(s).

- **Create Virtual Private Network (VPN):** The character may set up a VPN at any time. See Personal Area Networks on page @@ for more information. This action doesn't require a skill check.
- **Mask GISP**: Characters can mask their Tendril Access Processor and those of anyone connected to their VPN. The character must make a Hacking (Programming) skill check modified by the number of Tendril Access Processors she wishes to mask. Success imposes a -1 penalty to any Hacking rolls to gain access to your tap of that of those connected to your PAN. Raises on the roll increase the penalty by 1 per Raise.

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Masking a GISP without a skill check

Masking GISP addresses are generally operations that happen during down time, or when prepping for a mission. Consequently, it only makes sense that the character doing the masking is going to take their time to do it right. Therefore, at the GM's discretion, characters can forego skill checks, but they only get the benefits as if they succeeded. If a character wants to try for a raise, they must make the skill check.

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DAMAGING A SYSTEM OR DEVICE

When a computer system takes damage from malware, it can suffer a number of Wound levels before it crashes and is useless. Once that happens, the system must be repaired before it can be used again. If the system is a Tendril Access Processor, the character gains the Unplugged Hindrance until the TAP is repaired.

Example: Neon_Bright needs to hack a security camera with a tier 2 Intrusion Defense System (IDS). She wants to completely shut down the camera, so she decides to use her pestilence virus, which corrodes the circuitry of the target system. Neon_Bright makes a Hacking roll at a -1 penalty imposed by the Camera's IDS and scores a total of 8. The virus runs and

attacks the security camera. Neon_Bright rolls her program's damage (2d6+1) and scores a 5. The security camera's Resilience Rating is 4, so the program does a single Wound of damage. Since the camera is a device, it can only take a single Wound before it is destroyed, so it emits sparks, makes a loud crackling sound, and shuts down.

computer systems and Devices Table		
Device/Computer System	**Resolution**	**Effect(s)**
Alarm System	Hacking skill roll	The alarm system can be shut down or reprogrammed.
Camera	Hacking/Notice skill roll	Cameras may be shut down, have their feeds edited, or used to view an area. Characters may also upload malware to cameras and destroy their circuitry.
Cybertech Implant	Hacking VS Smarts Test	The benefits provided by an implant are disabled until the connection is re-established.
Computer System	Hacking skill roll	See the Access section for possible effects.
Drone	Hacking roll if the drone is in autonomous mode or a Difficult Dramatic Task if actively controlled by the owner.	Character who have hacked a drone can shut it down or operate it with the appropriate skill (generally Boating, Drive or Pilot). If they have the right malware, they can even destroy it. If the drone has weapons, the character can use them if they have Shooting.
Elevator	Hacking skill roll	Elevators can be controlled remotely or locked down or unlocked.
Hyper Object	Hacking skill roll	Hyper Objects can be shut down or edited.
Lock	Hacking skill roll	Locking mechanisms can be locked/unlocked or edited to change passwords and other authorization protocols such as biometric data.
Machine (Complex)	Difficult or Complex Dramatic Task	Varies depending on the machine, though most often the machine is either shutdown, turned on, or overloaded/destroyed through use of malware. See Malware on page @@ for more information.
Machine (Simple)	Hacking skill roll	
Network (Civilian)	Challenging Dramatic Task	Successfully hacking a network gives the character access to anything connected to the network, including users. The character may perform any action described in the Access section of this chapter. If the character has the proper malware, she can distribute it to every system connected to the network. Shutting down a network can cause a Shaken condition. See Rebooting on page @@ for more information.
Network (Corporate)	Difficult or Complex Dramatic Task	
Network (Government and Military)	Complex Dramatic Task	
Radio Signal (Civilian encryption)	Hacking skill roll	The character is able to monitor the signal. She may also jam the signal if she has the proper equipment.
Radio Signal (Military Encryption)	Complex Dramatic Task	
Satellite Feed	Complex Dramatic Task	The character gains access to the satellite and can use it or take it offline. If she has the proper malware, she can distribute it to every system connected to the satellite.
Sensor	Hacking skill roll	The character can shut down the sensory array or manipulate it to give false readings.
Tendril Access Processor	Hacking skill roll	The character can access anything installed on the TAP including software, data files and any linked devices, including Cybertech. Characters may also upload malware to a TAP.
Smart Weapon (Civilian)	Hacking skill roll	Hacking a smart weapon allows a character to eject a clip, activate any security protocols, or change them to lock the user out. Characters may also upload malware to a smart weapon and destroy its microprocessor.
Smart Weapon (Military)	Hacking skill roll	
Vehicle (Civilian)	Hacking skill roll	Character with access to a vehicle can do things like turn the vehicle on/off, overload the circuitry, upload malware, and even
Vehicle (Corporate)	Hacking skill roll	

Vehicle (Government)	Challenging Dramatic Task	remotely take control of the vehicle, provided they have the appropriate skill. Characters may also upload malware to vehicles and destroy their processing units.
Vehicle (Military)	Complex Dramatic Task	
Weapon System (Civilian)	Hacking skill roll	Weapon systems can be shut down or used if the character has the appropriate skill. Characters may also upload malware to a weapon system and destroy its microprocessor.
Weapon System (military)	Complex Dramatic Task	

COMPUTER SYSTEMS AND DEVICES

Interface Zero defines a computer system or a device as anything with a microprocessor attached to it. Alarm systems, security systems, cybertech, cars and other vehicles, doors, elevators, lights, entertainment systems, Tendril Access Processors, smart weapons, and more complex weapon systems—anything you can imagine is potentially hackable.

Computer systems: computer systems are capable of performing a wide range of things. They control the functions of nearly anything you can think of. They link networks together, store data and control various devices which are linked to them. Home and workplace computer systems, vehicle and robot processors, research and development mainframes, and network servers are examples of computer systems. When you hack a computer system you can access data files on the system, and modify any devices linked to the system.

Devices: Devices are peripheral components linked to a computer system. They serve a specific purpose and nothing else. Hacking a device gives you limited control over it. For instance, you might hack a security camera to view the area it covers, edit the feed to mask your presence, shut it down or destroy it entirely. A smart weapon is also designated as a device. Once you have accessed it, you can do simple things like fry the microprocessor, eject the clip or, if the weapon has locking features, you can change those features and prevent the owner from using it.

All computer systems and devices have the following statistics:

- **Tier:** The tier of a Computer System determines how formidable the Intrusion Defense System is. IDS tiers range from 1 to 5, 1 being the lowest and 5 the most secure. tiers set the scale for Hacking skill penalties to access the systems they protect. If installed in a Tendril Access Processor, the tier determines the Range of the TAP's Personal Area Network. tiers also indicate what skill die the IDS uses when responding to intruders. Finally, the cost of a computer system is determined by its tier.
- **Active Memory Sectors (AMS):** Active Memory Sectors determine how many programs a character can have running on their computer system at one time. This number is equal to double the tier of the computer system. Programs occupy a number of AMS slots based on the rating of the program. See programs on page @@ for more information.
- **Hacking Penalty:** All computer systems have encryption designed to block unwanted attempts to penetrate the systems they protect. Each level of encryption is represented by a penalty which is applied to any Hacking skill rolls made to penetrate the system. As with anything, you get what you pay for. The cheapest Intrusion Defense Systems cost 500 cryptodollars, but do not have any penalties to Hacking rolls, while the most expensive IDS can cost upwards of 300,000 cryptodollars and are beasts in terms of encryption.
- **PAN Range:** This entry only applies to Tendril Access Processors. It notes the Range of the TAP's Personal Area Network. If a character wants to hack a computer system or device outside the Range of her PAN, she can do so, but suffers a -1 penalty for every 12" beyond her PAN's Range. If the character has gained access to a computer system and moves out of Range, she may attempt to maintain her connection by making a Hacking test. This Test is considered a Free Action. If she succeeds, the connection is maintained, but she still suffers the afore-mentioned penalty for hacking outside her Pan's Range.
- **Resilience:** All computer systems are designed to withstand corruption damage from malware (See page @@), and the Resilience rating reflects that. Resilience is equal to 2 plus double the IDS rating of the computer system.
- **Wounds:** When a computer system takes damage, it can suffer the number of Wound levels before crashing. See Damaging a Computer System on page @@ for more information. Devices can only take a single Wound before they are destroyed.
- **Skill Die:** The tier of a computer system determines its base skill die, which is used for Hacking and Notice rolls.

- **Cost:** The cost of the computer system is listed in this entry.

Computer System and Network Table							
Tier	**AMS**	**Hacking Penalty**	**PAN Range**	**IDS skill die**	**Resilience**	**Wounds**	**Cost**
Tier 1	2	0	3" (18 Feet)	D4	4	3	$500.00
Tier 2	4	-1	6" (36 Feet)	D6	6	3	$2,500.00
Tier 3	6	-2	12" (72 Feet)	D8	8	3	$12,500.00
Tier 4	8	-4	24" (144 Feet)	D10	10	4	$62,500.00
Tier 5	10	-6	48" (288 Feet)	D12	12	5	$312,500.00

THE PERSONAL AREA NETWORK

As a free action, your character can give access to your Personal Area Network to as many people as you like, effectively creating an extended PAN, colloquially known as a VPN, or Virtual Private Network. This is often standard operational procedure for any team going on a mission. The team's hacker creates a VPN that allows communications between each team member. They can share real-time data such as camera feeds, and any communications they may be monitoring.

OVERWATCH

While acting as Overwatch, your character may respond to any intrusion attempt against team members currently logged onto your PAN as if the intrusion attempt were made against you. Moreover, the overall security rating of each system connected to your Personal Area Network is equal to the IDS rating of your Tendril Access Processor.

More often than not, the team's hacker takes control of the extended network and acts in an Overwatch capacity, monitoring the team network and dealing with any threats to network security. The character on Overwatch can monitor a number of TAPs connected to his Personal Area Network equal to half his Hacking skill. If the character acting as Overwatch does not have Hacking, he can monitor a number of Tendril Access Processors equal to half his Smarts die. All characters on the VPN must stay within Range of the person acting as Overwatch or lose their connection to the network.

Example: XenoByte is acting as Overwatch for his team as they prepare to raid a Triad safe house. There are five members logged into XenoByte's Personal Area Network. His Hacking skill is d8, so he can monitor four people (4[Half his hacking skill] = 6). Looks like someone is out of the loop.

COMPUTER SYSTEM DESCRIPTIONS

The following descriptions are provided to give you a general idea of what the system is like, who might have one, and where you might expect to encounter them.

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computer systems higher than tier 5?
Because our system for computer systems scales, applying a -2 penalty per tier, it is easy to continue scaling the computer systems beyond tier 5, depending on how nightmarish (or all-but impossible to hack) you want the protection to be. The descriptions provide ideas for what each tier should represent thematically, so if we are talking tier 6, 7, 8, etc. the types of systems characters encounter shouldn't be commonly encountered. Characters might have to deal with these systems perhaps once or twice in an entire campaign, and the secrets or things they protect should have a pretty large impact on your game.
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TIER 1 COMPUTER SYSTEMS

Tier 1 computer systems come pre-installed on most computer systems. The average sprawler typically has the same computer systems that came with their TAP and, trusting the almighty megacorp to protect them, has not bothered to

upgrade them. Similarly, "Mom and Pop" stores and other small businesses typically do not spend a ton of cryptodollars on security for their networks; money's too tight to waste on something that may or may not happen. DigiShield®, or Sphinx-ware® are examples of tier 1 computer systems. They have basic sprites that are often as helpful as a sector cop on the take.

Sample computer systems: Vending machines, simple security systems, Novice Wild Cards, an Extra's TAP, the Local Area Network for a coffin motel or convenience store and most land-based vehicles costing between 500 and 10,000 cryptodollars.

TIER 2 COMPUTER SYSTEMS

Tier 2 computer systems are a step above tier 1 computer systems. They provide a higher level of security, but you have to pay for them. Tier 2 systems are commercially available throughout the world. The Onion Net Industries' SATA ST-8 Glacier® series computer systems or Kenta Cyber Dynamics' Iron Wall® series are the most commonly purchased tier 2 IDS on the market.

Sample computer systems: Commercially available drones, networks protecting mid-range businesses, Tendril Access Processors for Novice and Seasoned Wild Cards, and most land-based vehicles costing between 10,000 and 30,000 cryptodollars have tier 2 IDS.

TIER 3 COMPUTER SYSTEMS

Tier 3 systems are for the sprawler who is serious about the security of their TAP and networks. While these computer systems are available on the open market, they are much higher in price for a single purchase (No customer service is available for one-time purchases). Many corporations offer subscription packages which include advanced sprites bundled with the software, though these are equally steep. Kenta Cyber Dynamics is the industry leader in 24-hour monitoring of your TAP or computer network. Their Vigilant Shogun® Intrusion Defense System is rated 10 of 10 stars by Tech20, the premiere software review TAPcast across the world. Coming in a close second are Onion Net Industries with their PANpoint® Protection software.

Sample computer systems: Custom-built drones, networks protecting larger corporations and their subsidiaries, security systems, properties owned by criminal organizations, the TAPs for mid to high-tier bosses, larger gangs, police, Veteran Wild Cards and vehicles in the 30 to 50k range typically have these types of computer systems running on their systems.

TIER 4 COMPUTER SYSTEMS

Tier 4 computer systems offer the most powerful commercial protection a sprawler can buy. These software packages are designed to protect against all types of malware including Brute Force attacks, Command Injection exploits, Denial of Service attacks, Spear-fishing attacks, Zero-Day Exploits, and many more. The database is also constantly updating to protect against the newest forms of malware. Ravenlocke Securities' Archangel IDS is the most commonly known defense system and is deployed on many government networks across the world. It is thought the sprites are true AI's slaved to the systems they protect.

Sample computer systems: Megacorporate networks, security teams, government employees and city-wide infrastructures such as water treatment facilities, power grids, armored vehicles, Heroic-ranked Wild Cards, and other high-profile individuals such as media stars, power-brokers and crime bosses all have access to this level of security.

TIER 5 COMPUTER SYSTEMS

Face it, nakama; if you run into these types of systems, you've either got big brass ones or you tumbled down the wrong rabbit hole. These systems have AI capable of deploying the worst of the worst I.C. you'll ever encounter; the kind that can trace your GISP to a single hair on your head and drop Remote Access Trojans capable of frying your brain.

Sample computer systems: Military buildings and infrastructure (including vehicles such as Golemmechs, powered armor, fighter aircraft), Legendary-ranked Wild Cards, Space Station docking networks and other heavily restricted areas employ tier 5 IDS.

SPRITES

Sprite act as a personal assistant for your character. Sprites are capable of detecting and repelling unwanted intrusions in a computer system or network. In computer networks, they often act as overwatch, monitoring entire infrastructures and dealing with any problems that might arise. They can help characters with Support rolls for things like Hacking skill rolls. Sprites are treated as Allies, and they may even have personalities. See Allies in *Savage Worlds* for more information.

- **Attributes:** Sprites have a rating equivalent to a Rank (Novice, Seasoned, etc.). The rating determines the sprite's base Attribute die type, and the maximum tier of the computer system in which it can be installed.
- **Skills:** Sprites gain a number of skills equal to half their linked attribute. So, a sprite with a d6 Smarts would get three Smarts-based skills, a d8 Smarts would grant four, d10 five, etc.
- **Resilience**: Sprites have a Resilience rating which they use to resist malware attacks. The higher the sprite's Resilience, the better they understand how to defeat malicious code. A sprite's Resilience is 2 plus half its Smarts die.
- **Cost:** Sprites are an optional component for a computer system, and therefore must be purchased.

Note: There are only two Spirit-Based skills that make sense for an AI; Intimidation and Persuasion. It should be noted that sprites gain a D8 Spirit at Legendary rank, which would normally give them two extra d8 Sprit-based skills for a total of four skills. We make up for the difference by giving the sprite a Wild Die.

Sprite Table				
Rating	**Attributes**	**Skills**	**Resilience**	**Cost**
1	Smarts d4	Hacking d4, Notice d4	4	$5,000
2	Smarts d6	Hacking d6, Notice d6, Research d6	5	$10,000
3	Smarts d8	Hacking d8, Notice d8, Research d8, Taunt d8	6	$20,000
4	Smarts d10, Spirit d6	Hacking d10, Language d10, Notice d10, Research d10, Taunt d10, Intimidation d6, Persuasiond6, Wild Die	7	$40,000
5	Smarts d12, Spirit d10	Academics d12, Hacking d12, Language d12, Notice d12, Research d12, Taunt d12, Intimidation d8, Persuasion d8, Wild Die	8	$80,000

SPRITE ACTIONS

Sprites are capable of performing any Actions a character can perform. They can also Support characters in Networking rolls and Dramatic Tasks.

SPRITES AND OTHER SKILLS

Nowadays, we're starting to see new technology designed to automate the driving experience. Self-driving cars are fast-becoming a reality. In 2095, you'll find all manner of automated vehicles and "smart" weapon systems throughout the world. Generally speaking, they are controlled by sprites. At the GM's discretion, sprites can know skills like Boating, Drive, Pilot or even Shooting. This type of knowledge reflects a rudimentary understanding of the mechanics required to operate a vehicle or fire a weapon. For example, a sprite might understand how to auto-drive a car from point A to point B, but it can never perform the type of maneuvers a hot-shot pilot with the Ace Professional Edge could do.

PROGRAMS

The following section provides rules for players who wish to make hacking more interesting and sometimes even dangerous. To achieve this, we introduce programs.

ACQUIRING PROGRAMS

To acquire a program, characters must take the New Program Edge. This Edge requires the character to have the Hacker Professional Edge and meet any other requirements indicated by the program they wish to learn. See Edges on page @@ for more information.

ACTIVATING PROGRAMS

Programs take an Action and generally require a successful Hacking roll to activate. Some programs might require another skill to use, such as Notice, Research, or Repair. Activating more than one program at a time incurs a multi action penalty.

GENERAL CHARACTERISTICS OF PROGRAMS

Some programs are designed to cause physical damage to the TAP. Others cause heat damage that can generate Fatigue (Bumps and Bruises) for the victim. Still others can cause victims to experience temporary Hindrances, or even suffer the effects of Conditions. The following characteristics are common to programs.

Continuous operation: Programs are software, and they run until they are turned off or deleted.

Corruption damage: Corruption damage is a new type of damage. Corruption attacks the core programming of a device, degrading the code structure until the operating system crashes. Corruption can damage a Sprite by overcoming its Resilience, or directly harm a Tendril Access Processor and its IDS rating by overcoming the TAP's Resilience rating. See Resilience on page @@ for more information. Corruption damage can also affect any devices with a processing unit installed. If the processor is destroyed, the device will not work until the CPU is replaced with a Repair roll.

Physical damage: Some programs can physically harm a person via their Tendril Access Processor by generating dangerous levels of heat. Worn armor doesn't apply to this type of damage in terms of calculating Toughness. Tendril Access Processors can be fitted with heat sinks. Heat sinks act as armor and increase the user's Toughness rating.

Mental effects: Some types of malware affect a user's senses by manipulating the information which passes to and from the core processing unit and the brain-machine interface.

PROGRAM DESCRIPTIONS

All programs have the following entries.

- **Program Name:** The name of the program is listed in this entry.
- **Requirements:** Each program has special prerequisites which must be met in order to obtain the program. These are listed here.
- **AMS**: The TAP can store an infinite number of programs, data files and other media. But if a character wants to use programs, the character must load them into slots known as Active Memory Sectors. Any programs in loaded into AMS can be used as an Action (See Activating programs for more information.). The AMS rating determines the number of Active Memory Sectors the program occupies. Characters can remove or switch or add a program to an AMS slot as an Action.
- **Skill:** While Hacking is the default skill to launch a program, some may require other skills to use. The appropriate skill is listed here.
- **Rating:** All programs are rated between one and five. This rating sets a penalty to any Hacking skill rolls to remove it from a computer system or network.
- **Type:** Programs come in two basic types; applications and malware. Applications are programs that aid the hacker in some way, shape or form. Malware are offensive programs which also act as intrusion countermeasures.
- **Description:** The description of the program's effects is listed here.

PROGRAM LIST

The following programs are available in 2095.

Name: Autodoc

Requirements: Novice, Hacker, d6 Hacking (Programming)
AMS: 1
Skill: Repair
Type: Application
Rating: 1 (-1 penalty to Hacking rolls to delete the program)
Description: Autodoc is designed to counteract the damaging effects of malware on a Tendril Access Processor. Autodoc does not remove physical damage to a character as a result of malware, but it can repair corruption damage to the CPU. The program works similar to the Healing power, but the character rolls her Repair skill to fix corruption damage.

Name: Autoscanner
Requirements: Novice, Hacker, d6 Hacking (Programming)
Skill: Research
AMS: 1
Skill: Research
Type: Application
Rating: 1
Description: Autoscan speeds up the datamining process, reducing the time it takes to find information by 1 round.

Name: BlackRAT
Requirements: Seasoned, Hacker, d8 Hacking
AMS: 2
Skill: Hacking
Type: Malware
Rating: 2 (-2 penalty to Hacking rolls to delete the program)
Description: BlackRATs are Remote Access Trojans designed to give hackers direct access to computer systems via backdoors they create when launched on the target system. Penalties to Hacking skill rolls to create a backdoor are reduced by 1.

Name: Blaster
AMS: 2
Skill: Hacking
Requirements: Novice, Hacker, d6 Hacking (Programming)
Type: Malware
Rating: 1 (-1 penalty to Hacking rolls to remove it from an infected system)
Description: Blaster overclocks the CPU, generating dangerous levels of heat in the target's brain. The target takes 1d4+1 damage (Bumps and Bruises) every round until the malware is deleted.

Name: Corruptokhan
Requirements: Novice, Hacker, d6 Hacking (Programming)
AMS: 2
Skill: Hacking
Type: Malware
Rating: 1/-1
Description: Corruptokhan is a program designed to fry the circuitry of the Tendril Access Processor. It does 1d6+1 points of Corruption damage toa computer system's CPU every round until it is deleted.

Name: DeletePro
Requirements: Novice, Hacker, d6 Hacking (Programming)
AMS: 1
Skill: Hacking
Type: Application
Rating: 1 (-1 penalty to Hacking rolls to delete the program)
Description: DeletePro is a virus scanning tool which identifies malware and attempts to delete it from the system. Reduce the rating of the program you wish to delete from your computer system by 1 when making Hacking skill checks to delete the program.

Name: Hyper Editor
Requirements: Seasoned, Hacker Professional Edge, d8Hacking
AMS: 2
Skill: Hacking (Programming)
Type: Application
Rating: 2/-2
Description: Hyper Editor is an application that allows a user to quickly modify any Hyper Objects they have access to. The program allows a character to edit a Hyper Object as a Free Action rather than an Action.

Name: ICEpick
Requirements: Seasoned, Hacker Professional Edge, d8Hacking
AMS: 2
Skill: Hacking
Type: Malware
Rating: 2 (-2 penalty to Hacking rolls to remove it from an infected system)
Description: ICEpick grants a +1 bonus to Hacking skill checks to gain access to a computer system or network.

Name: Mask Maker
Requirements: Veteran, Hacker, d10 Hacking (Programming)
AMS: 1
Skill: Performance (Disguise)
Type: Application
Rating: 3/-3
Description: Mask Maker is a purely cosmetic application that generates a Hyper Mask around the user's face, allowing her to effectively change her facial appearance to another person as Hyper Reality mask. Observers that have reason to question the disguise roll Notice -2, as a free action. Unplugged observers automatically see the character's normal appearance.

Name: Mindfrag
Requirements: Veteran, Hacker, d8 Hacking (Programming)
AMS: 2
Skill: Hacking
Type: Malware
Rating: 3 (-3 penalty to Hacking rolls to remove it from an infected system)
Description: Mindfrag is a variant on the blaster program. It does 2d4+2 damage (Bumps and Bruises) to the target's brain every round until the malware is deleted.

Name: Partition Viper
Requirements: Seasoned, Hacker, d12 Hacking (Programming)
AMS: 1
Skill: Hacking (Programming)
Type: Application
Rating: 2/-2
Description: Partition Viper creates a firewall which aggressively protects selected parts of the computer system (linked devices, datafiles, etc.). Anyone trying to access these areas of the computer system must hack through the firewall. Failure automatically triggers a force boot attempt against the hacker. See the force boot action on page @@ for more information.

Name: Pestilence
Requirements: Veteran, Hacker, d8 Hacking (Programming)
AMS: 2
Skill: Hacking
Type: Malware
Rating: 3 (-3 penalty to Hacking rolls to remove it from an infected system)

Description: Pestilence attacks the computer system's CPU, doing 1d6+1 Corruption damage every round until it is deleted.

Name: Reality Editor
Requirements: Heroic, Hacker, d12 Hacking (Programming)
AMS: 2
Skill: Hacking (Programming)
Type: Reality Editor can be used as an application or as malware. See description.
Rating: 4 (-4 penalty to Hacking rolls to remove it from an infected TAP)
Description: This versatile program is capable of altering Hyper Reality for the affected user. As an application, the user can change how they view Hyper Reality. Visual elements make things more familiar and easier to recognize to the character, which in turn gives her a few advantages. The character's Common Knowledge Die increases by 1, to a maximum of d12+1 and a +1 to sight-based Notice rolls as long as the program runs.

As malware, the program allows the character to make sudden changes to the world around the target. When the program is launched, the target must make a Spirit roll or become Shaken. If the program remains on the target's Tendril Access Processor the following round, the target must make another Spirit roll or become Distracted. The condition lasts until the program is removed from the TAP.

Name: Surge Infection
Requirements: Seasoned, Hacker, d8 Hacking (Programming)
AMS: 2
Skill: Hacking
Type: Malware
Rating: 2/-2
Description: Surge Infection floods the target's Tendril Access Processor with an injection of data packets, causing a massive spike of activity in the CPU. The attack does 1d6+1 Corruption damage to the CPU and forces a Hacking VS Smarts against the target. Failure results in a Stunned Condition.
Special: Unlike other programs, Surge Infection is a single use program. To repeat the effect, the character must successfully launch the program again.

Name: Traceroute
Requirements: Novice, Hacker, d8 Hacking (Programming)
AMS: 1
Skill: Research
Type: Application
Rating: 2/-2
Description: Traceroute is an application designed to speed up trace attempts. The program reduces the number of Task Tokens needed by 1 for tier 1 and 2 Intrusion Defense Systems.

Name: Traceroute Deluxe
Requirements: Veteran, Hacker, d10 Hacking (Programming)
AMS: 1
Skill: Research
Type: Application
Rating: 3/-3
Description: Similar to Traceroute, Traceroute Deluxe reduces the number of Task Tokens needed by 2 for tier 1 and 2 IDS, and also reduces the number of task tokens needed by 1 for tier 3 and 4 IDS when making trace attempts.

Name: TraceroutePro
Requirements: Legendary, Hacker, d12 Hacking (Programming)
AMS: 1
Skill: Research
Type: Application
Rating: 5/-5

Description: The ultimate version of the Traceroute series, this version negates any Task Tokens needed to trace tier 1 and 2 IDS, further reduces Task Tokens for tier 3 and 4 IDS by 1, and drops the number of Task Tokens needed to trace tier 5 IDS by 1.

Programs						
Name	Requirements	AMS	Skill	Type	Rating	Description
Autodoc	Novice, Hacker, d6 Hacking (Programming)	1	Repair	Application	1/-1	Fixes Corruption damage to a computer system
Autoscanner	Novice, Hacker, d6 Hacking (Programming)	1	Research	Application	1/-1	Reduces time to datamine by a single round.
BlackRAT	Seasoned, Hacker, d8 Hacking (Programming)	2	Hacking	Malware	2/-2	Ignores 1 point of penalties to create a backdoor
Blaster	Novice, Hacker, d6 Hacking (Programming)	2	Hacking	Malware	1/-1	1d4+1 damage (Bumps and Bruises)
Corruptokhan	Novice, Hacker, d6 Hacking (Programming)	2	Hacking	Malware	1/-1	1d6+1 Corruption damage to CPU
DeletePro	Novice, Hacker, d6 Hacking (Programming)	1	Hacking	Application	1/-1	Reduces the rating of malware by 1
Hyper Editor	Seasoned, Hacker Professional Edge, d8Hacking	2	Hacking (Programming	Application	2/-2	Edit Hyper Objects as a Free Action
ICEpick	Seasoned, Hacker Professional Edge, d8Hacking	2	Hacking	Malware	2/-2	+1 bonus to Hacking skill checks to gain access to a computer system or network
Mask Maker	Veteran, Hacker, d10 Hacking (Programming)	1	Performance (Disguise)	Application	3/-3	-2 Penalty to Notice rolls to see through the disguise. Unplugged characters are immune.
Mindfrag	Veteran, Hacker, d8 Hacking (Programming)	2	Hacking	Malware	3/-3	2d4+2 damage (Bumps and Bruises)
Partition Viper	Seasoned, Hacker, d12 Hacking (Programming)	1	Hacking (Programming)	Application	2/-2	Secondary roll to hack through firewall. Failure triggers a force boot action.

Pestilence	Veteran, Hacker, d8 Hacking (Programming)	2	Hacking	Malware	3/-3	2d6+1 Corruption damage to CPU
Reality Editor	Heroic, Hacker, d12 Hacking (Programming)	2	Hacking (Programming)	Both: See Description	4/-4	Improved Common Knowledge die, +1 to Notice, can cause Shaken or Distracted in targets
Surge Infection	Seasoned, Hacker, d8 Hacking (Programming)	2	Hacking	Malware	2/-2	1d6+1 Corruption damage to CPU, Hacking VS Smarts Test or become Vulnerable. One use program (See Description)
Traceroute	Novice, Hacker, d8 Hacking (Programming)	1	Research	Application	1/-1	Reduces Task Tokens by 1 for trace attempts against tier 1 and 2 IDS.
Traceroute Deluxe	Veteran, Hacker, d10 Hacking (Programming)	1	Research	Application	3/-3	Reduces Task Tokens by 2 for trace attempts against tier 1 and 2 IDs, and by 1 against tier 3 and 4 IDS.
Traceroute Pro	Legendary, Hacker, d12 Hacking (Programming)	1	Research	Application	5/-5	Negates Task Tokens needed for trace attempts against tier 1 and 2 IDs, reduces Task Tokens for tier 3 and 4 IDS by 2, and by 1 for tier 5 IDS.