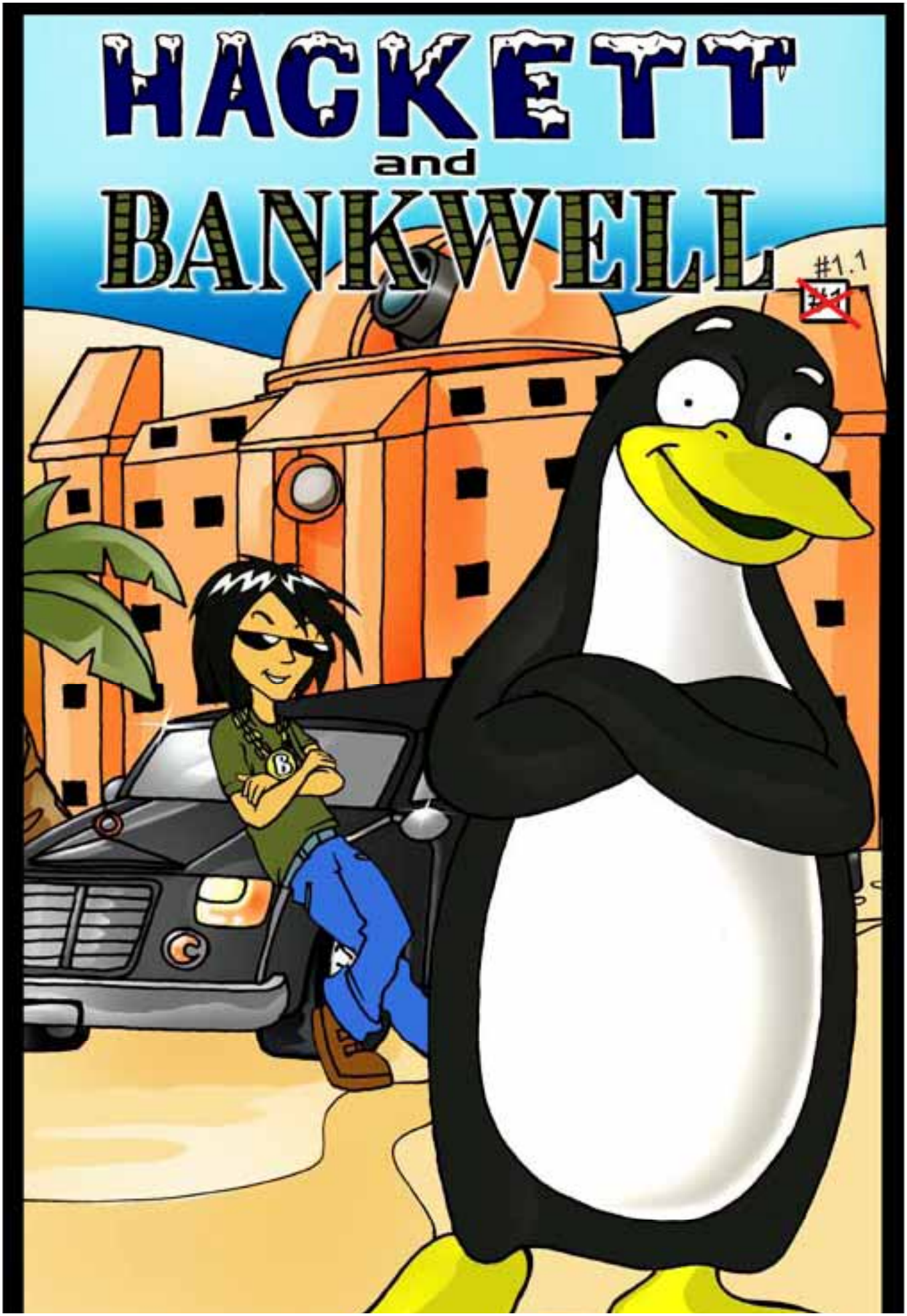
HACKETT
and
BANKWELL
#1.1


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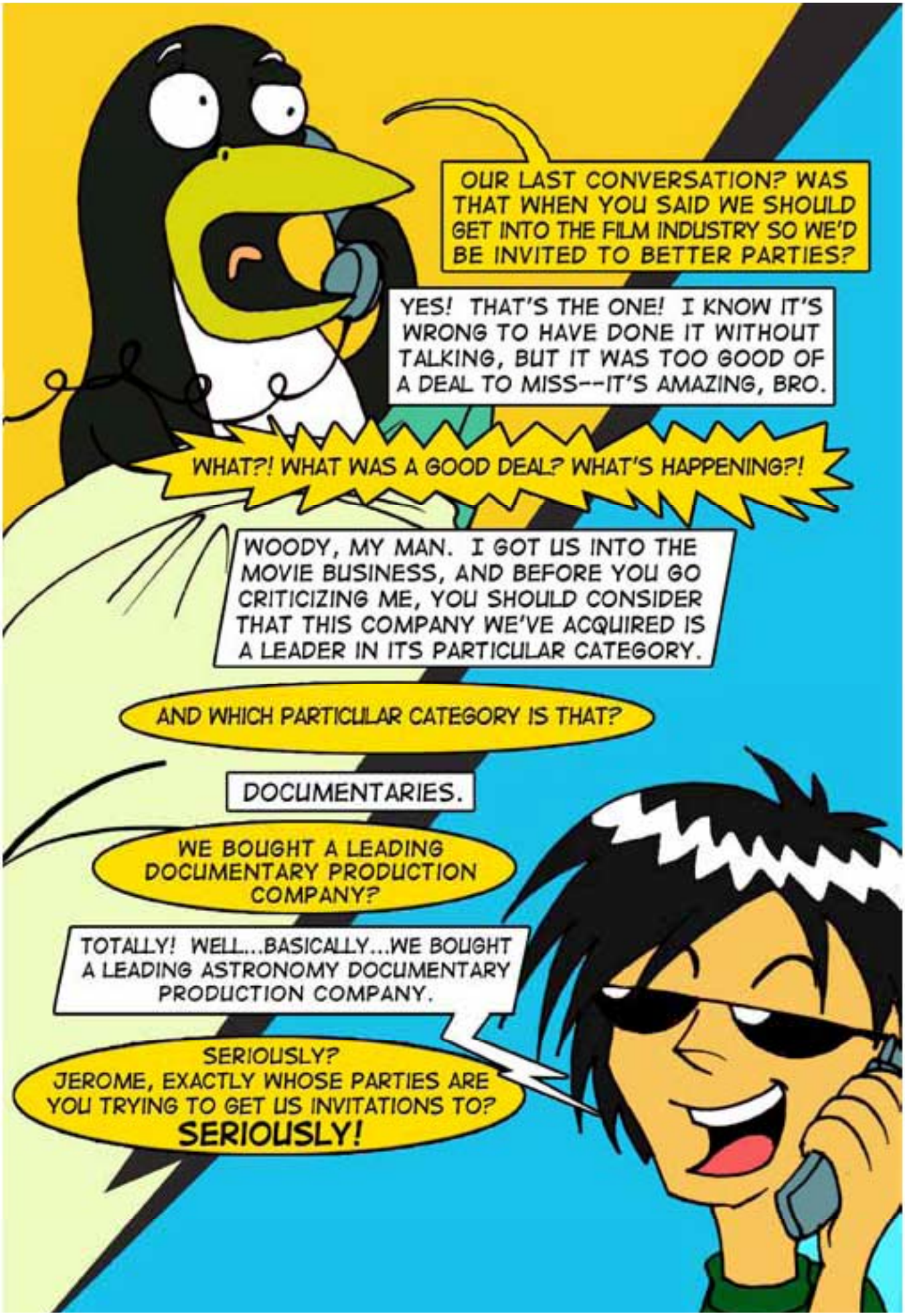
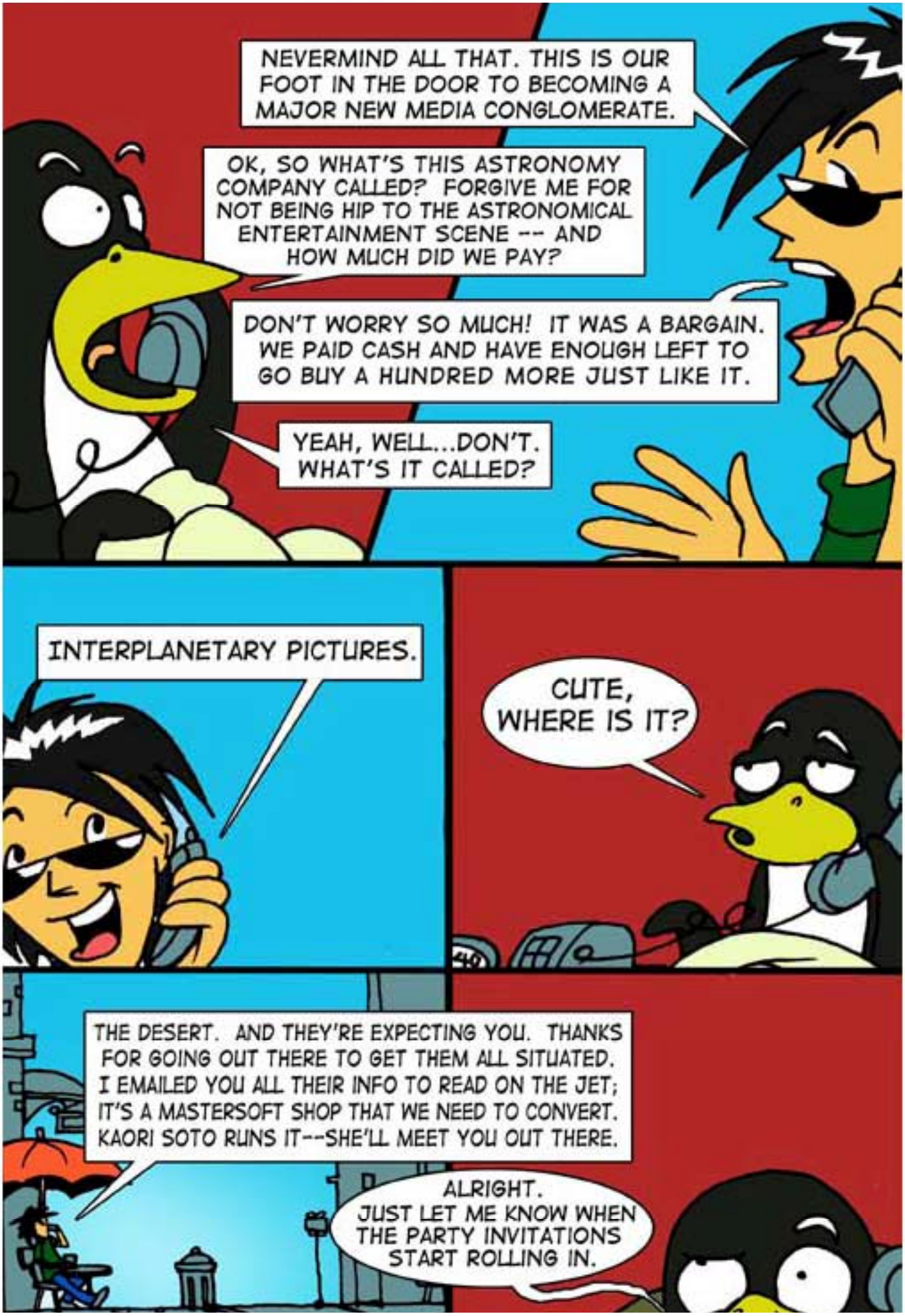
SouthEast|LinuxFest
LINUX IN THE GNU/SOUTH

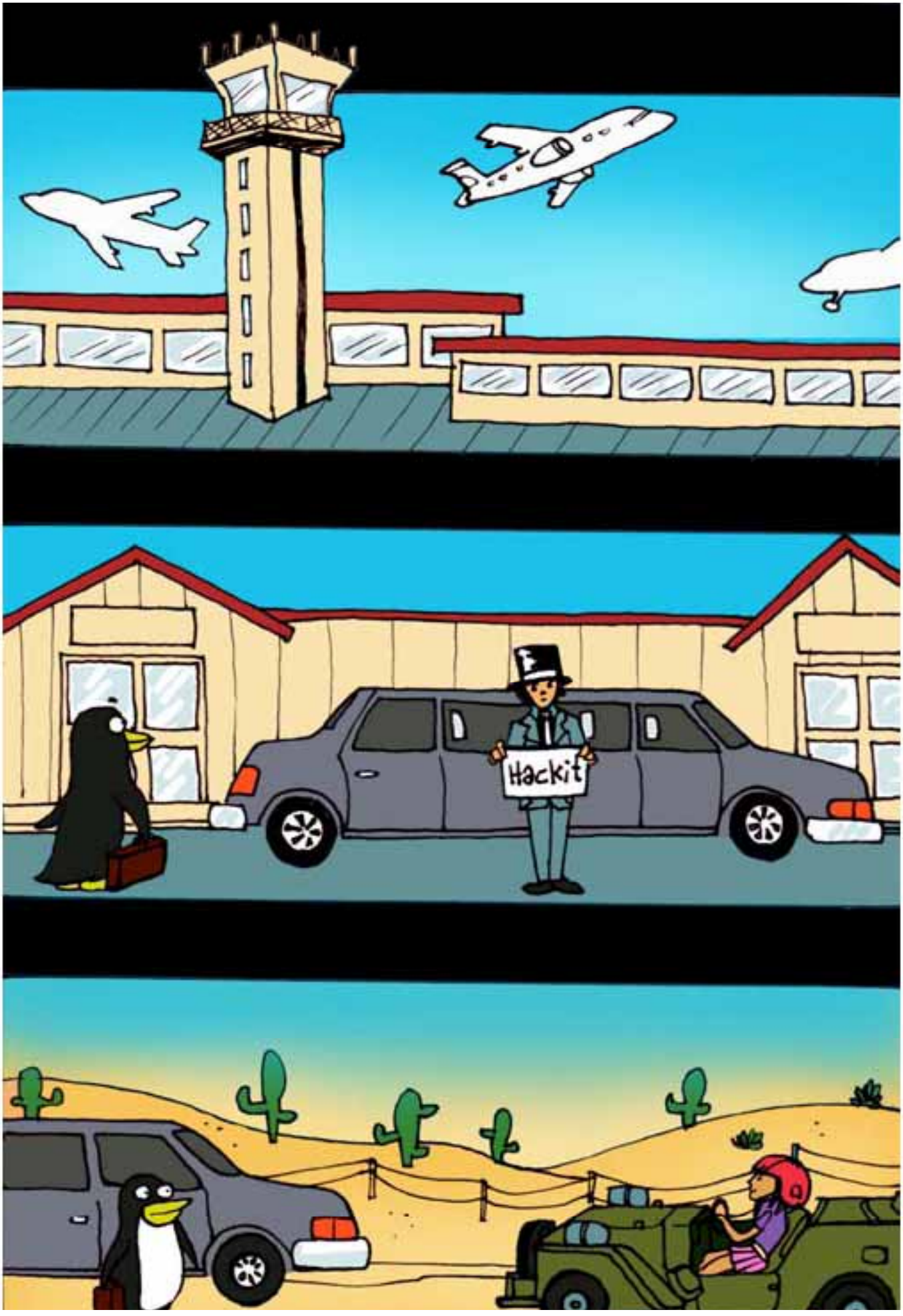
June 13, 2009
Clemson University Hendrix Student Center
Clemson, South Carolina
http://wiki.southeastlinuxfest.org

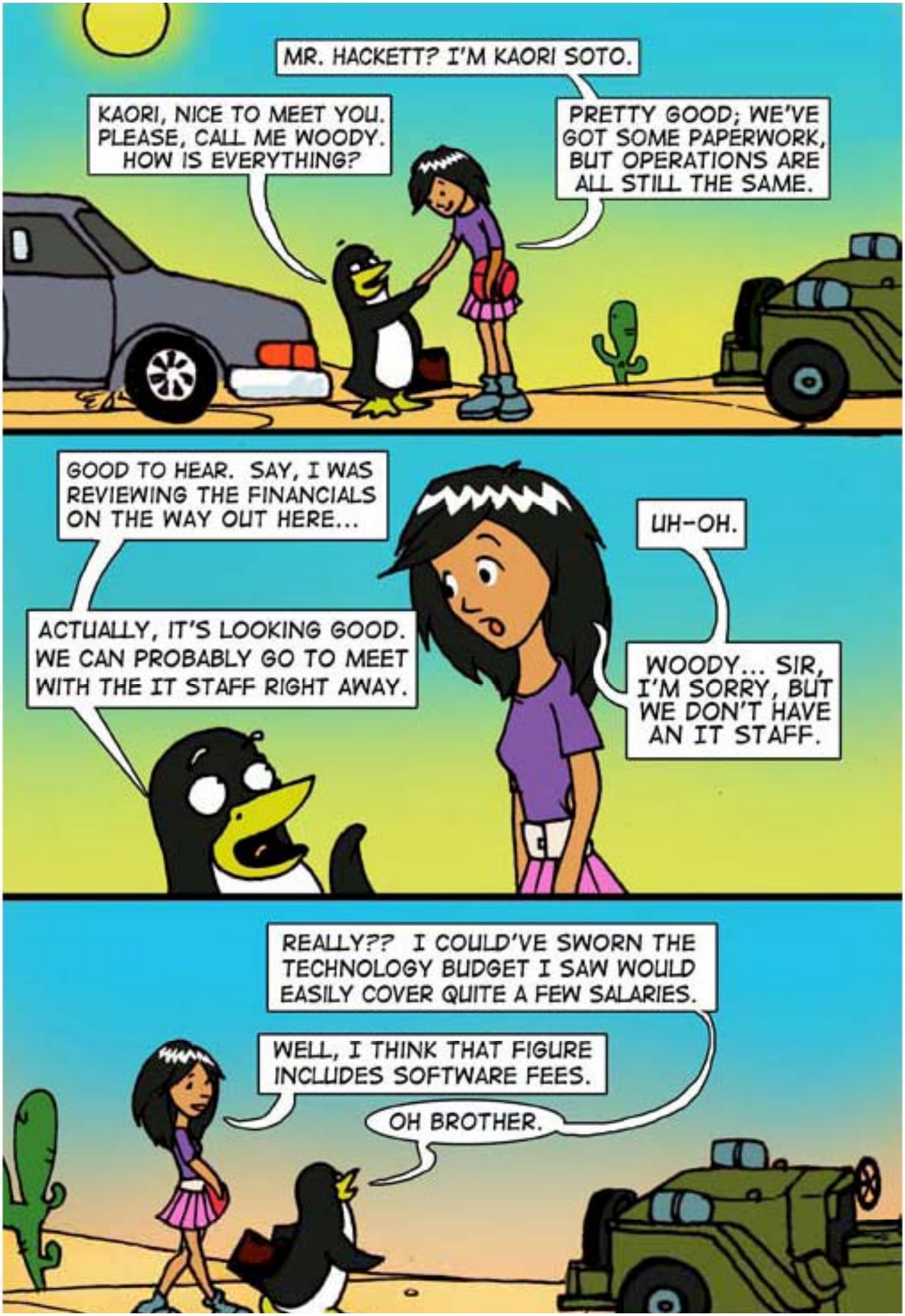
HACKETT and BANKWELL

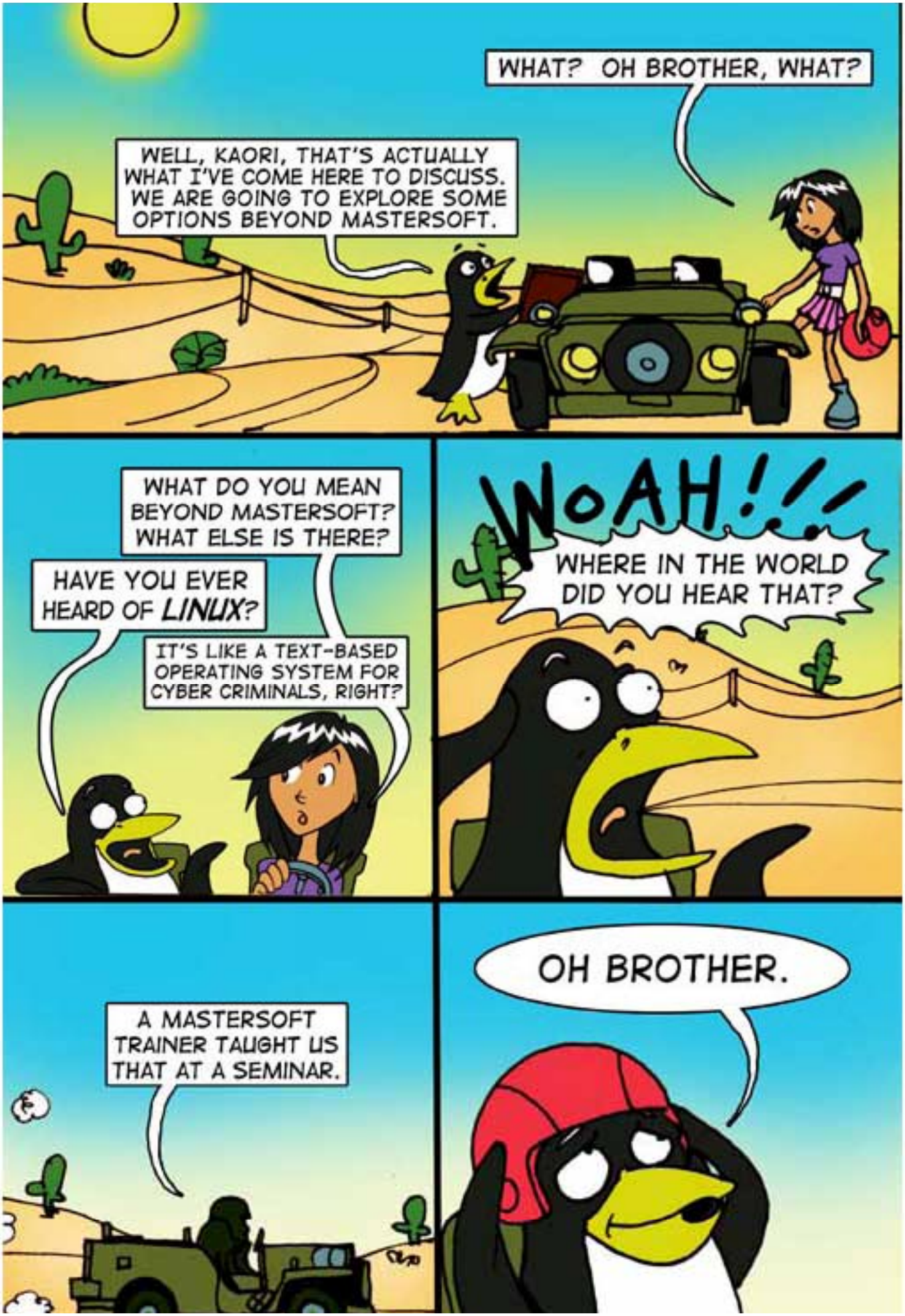



OUR LAST CONVERSATION? WAS THAT WHEN YOU SAID WE SHOULD GET INTO THE FILM INDUSTRY SO WE'D BE INVITED TO BETTER PARTIES?
YES! THAT'S THE ONE! I KNOW IT'S WRONG TO HAVE DONE IT WITHOUT TALKING, BUT IT WAS TOO GOOD OF A DEAL TO MISS--IT'S AMAZING, BRO.
WHAT?! WHAT WAS A GOOD DEAL? WHAT'S HAPPENING?!
WOODY, MY MAN. I GOT US INTO THE MOVIE BUSINESS, AND BEFORE YOU GO CRITICIZING ME, YOU SHOULD CONSIDER THAT THIS COMPANY WE'VE ACQUIRED IS A LEADER IN ITS PARTICULAR CATEGORY.
AND WHICH PARTICULAR CATEGORY IS THAT?
DOCUMENTARIES.
WE BOUGHT A LEADING DOCUMENTARY PRODUCTION COMPANY?
TOTALLY! WELL...BASICALLY...WE BOUGHT A LEADING ASTRONOMY DOCUMENTARY PRODUCTION COMPANY.
SERIOUSLY? JEROME, EXACTLY WHOSE PARTIES ARE YOU TRYING TO GET US INVITATIONS TO? SERIOUSLY!

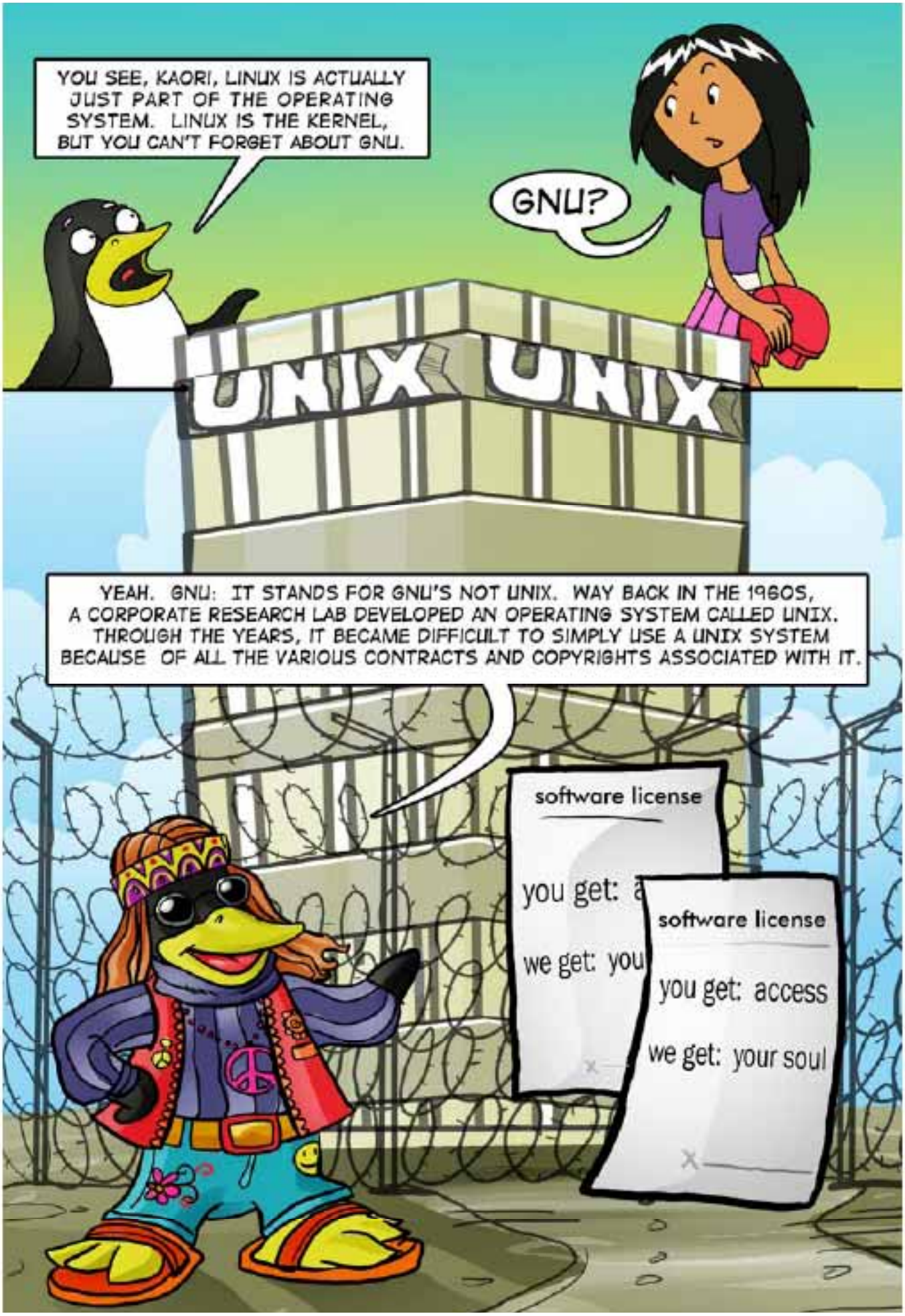

NEVERMIND ALL THAT. THIS IS OUR FOOT IN THE DOOR TO BECOMING A MAJOR NEW MEDIA CONGLOMERATE.
OK, SO WHAT'S THIS ASTRONOMY COMPANY CALLED? FORGIVE ME FOR NOT BEING HIP TO THE ASTRONOMICAL ENTERTAINMENT SCENE -- AND HOW MUCH DID WE PAY?
DON'T WORRY SO MUCH! IT WAS A BARGAIN. WE PAID CASH AND HAVE ENOUGH LEFT TO GO BUY A HUNDRED MORE JUST LIKE IT.
YEAH, WELL...DON'T. WHAT'S IT CALLED?
INTERPLANETARY PICTURES.
CUTE, WHERE IS IT?
THE DESERT. AND THEY'RE EXPECTING YOU. THANKS FOR GOING OUT THERE TO GET THEM ALL SITUATED. I EMAILED YOU ALL THEIR INFO TO READ ON THE JET; IT'S A MASTERSOFT SHOP THAT WE NEED TO CONVERT. KAORI SOTO RUNS IT--SHE'LL MEET YOU OUT THERE.
ALRIGHT. JUST LET ME KNOW WHEN THE PARTY INVITATIONS START ROLLING IN.

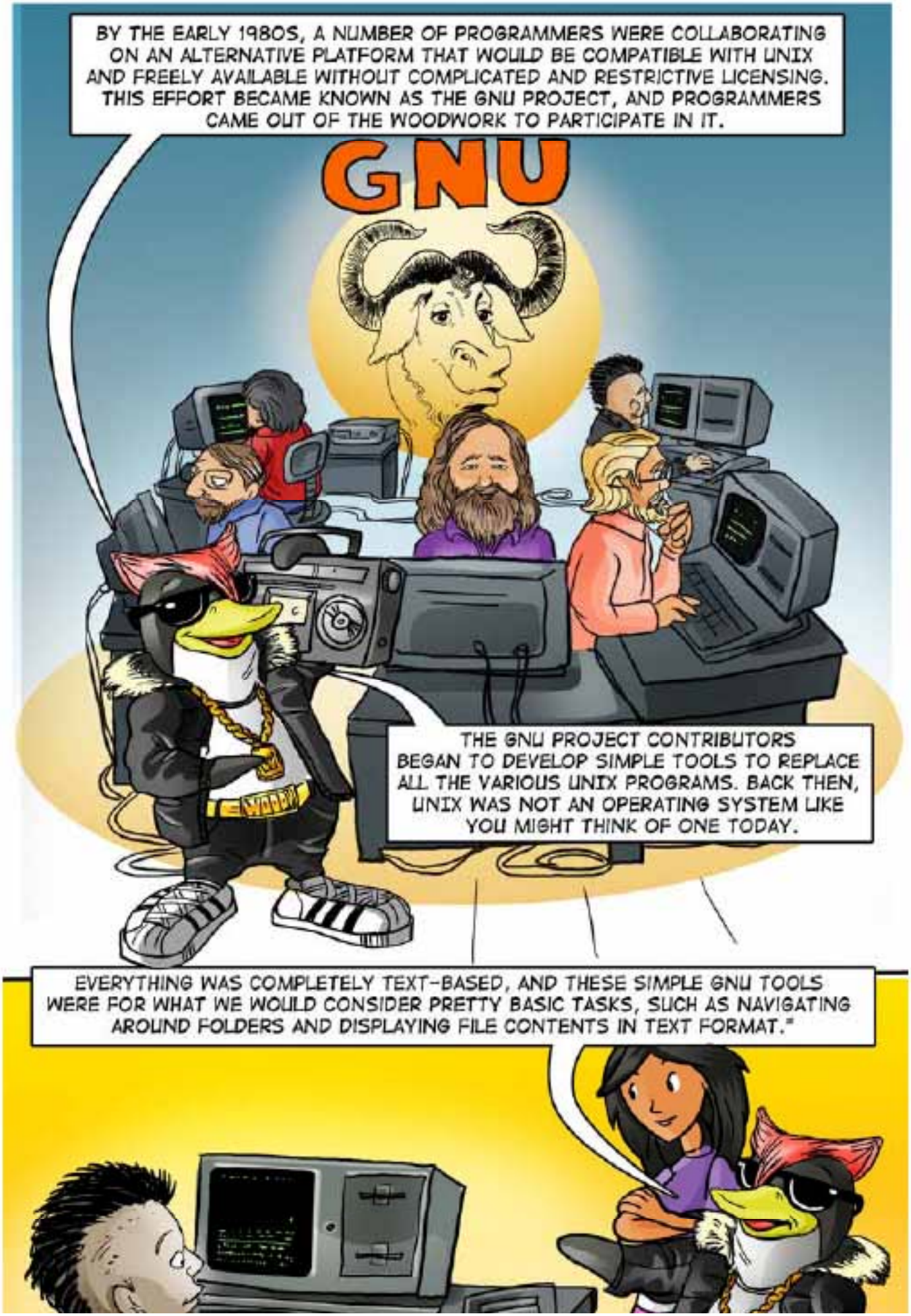

Hackit

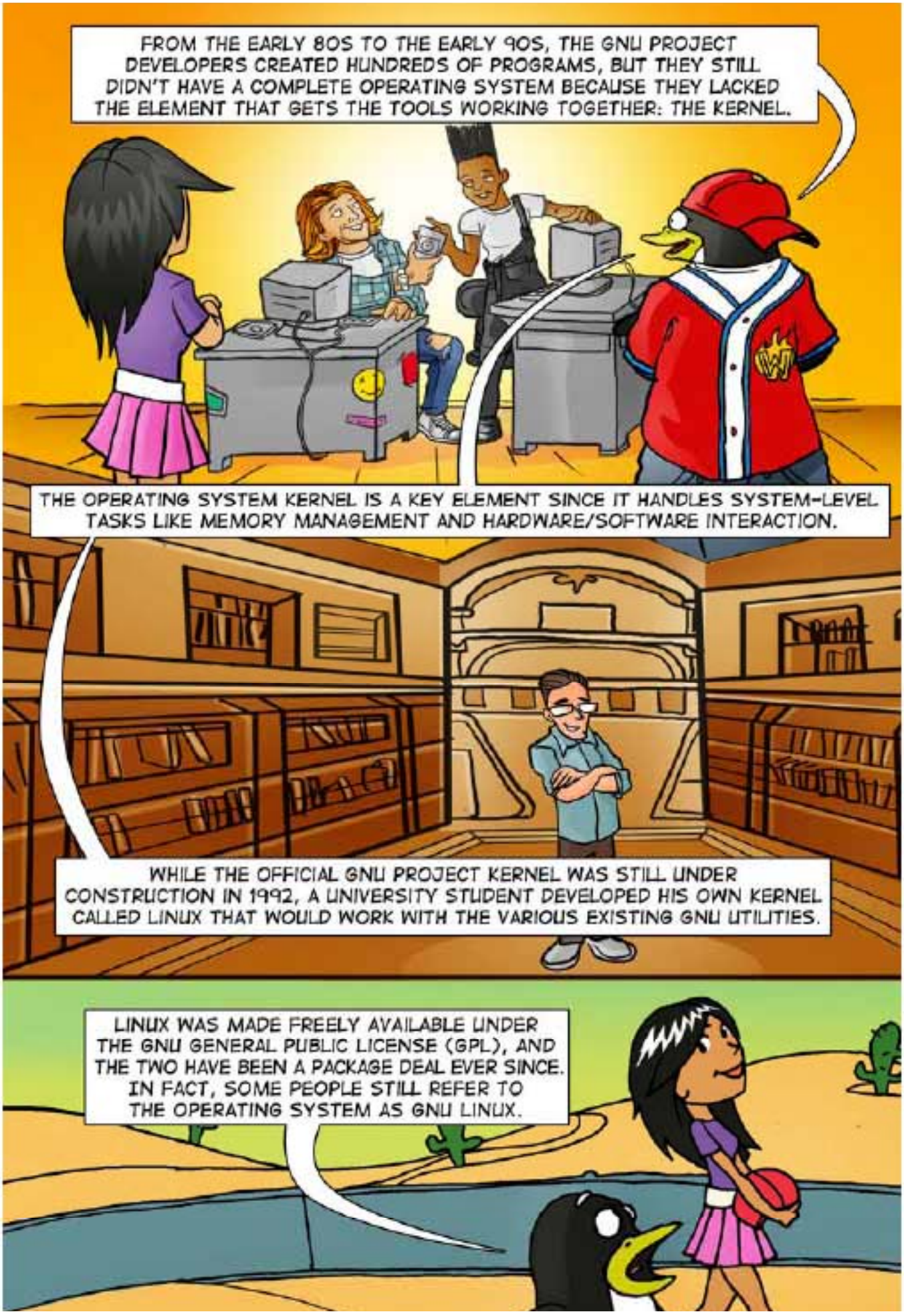

MR. HACKETT? I'M KAORI SOTO.
KAORI, NICE TO MEET YOU. PLEASE, CALL ME WOODY. HOW IS EVERYTHING?
PRETTY GOOD; WE'VE GOT SOME PAPERWORK, BUT OPERATIONS ARE ALL STILL THE SAME.
GOOD TO HEAR. SAY, I WAS REVIEWING THE FINANCIALS ON THE WAY OUT HERE...
ACTUALLY, IT'S LOOKING GOOD. WE CAN PROBABLY GO TO MEET WITH THE IT STAFF RIGHT AWAY.
UH-OH.
WOODY... SIR, I'M SORRY, BUT WE DON'T HAVE AN IT STAFF.
REALLY?? I COULD'VE SWORN THE TECHNOLOGY BUDGET I SAW WOULD EASILY COVER QUITE A FEW SALARIES.
WELL, I THINK THAT FIGURE INCLUDES SOFTWARE FEES.
OH BROTHER.

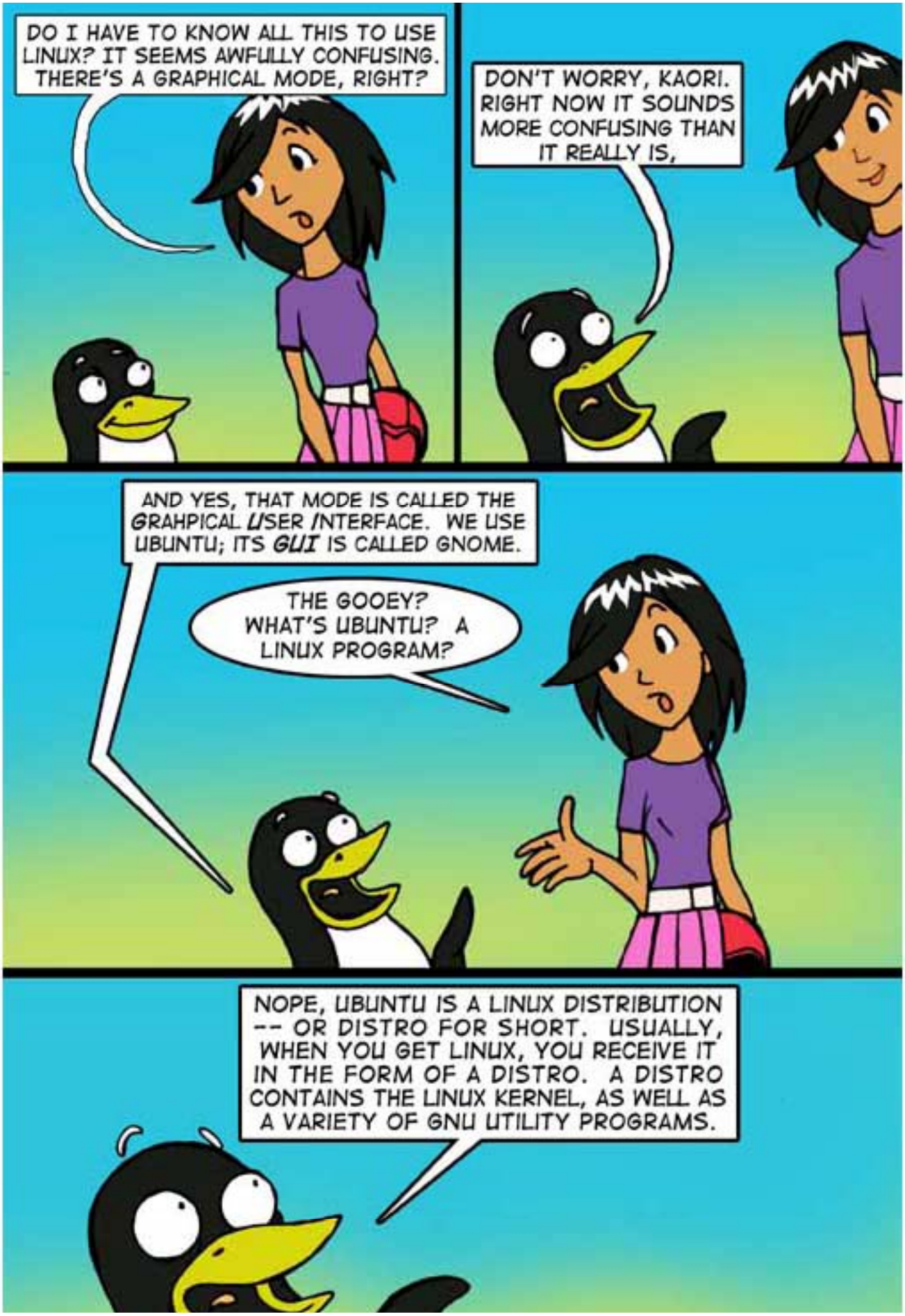

WHAT? OH BROTHER, WHAT?
WELL, KAORI, THAT'S ACTUALLY WHAT I'VE COME HERE TO DISCUSS. WE ARE GOING TO EXPLORE SOME OPTIONS BEYOND MASTERSOFT.
WHAT DO YOU MEAN BEYOND MASTERSOFT? WHAT ELSE IS THERE?
HAVE YOU EVER HEARD OF LINUX?
IT'S LIKE A TEXT-BASED OPERATING SYSTEM FOR CYBER CRIMINALS, RIGHT?
WOAH!!!
WHERE IN THE WORLD DID YOU HEAR THAT?
A MASTERSOFT TRAINER TAUGHT US THAT AT A SEMINAR.
OH BROTHER.

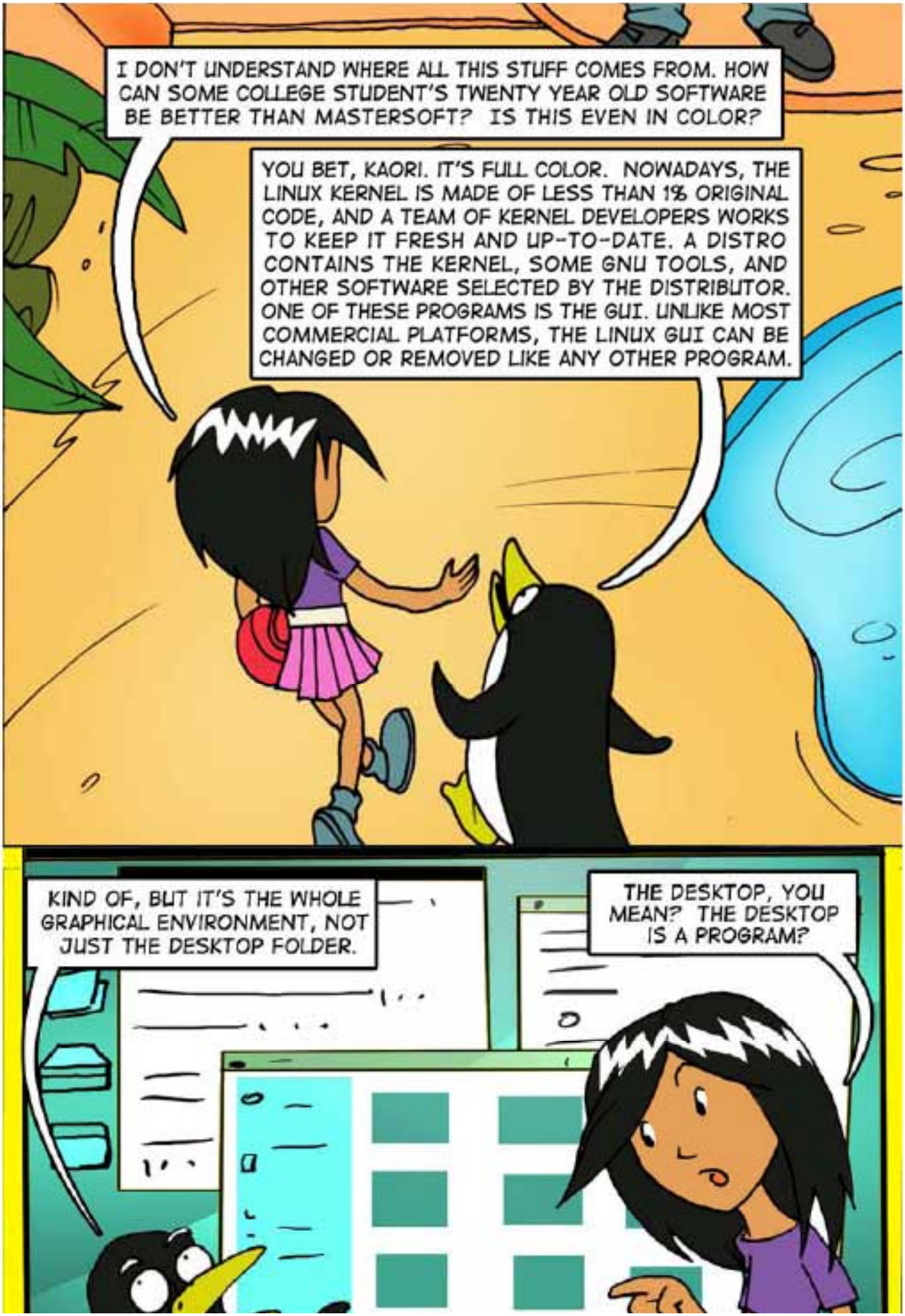

LINUX IS SO MUCH MORE THAN A COMMAND LINE HACKER PLATFORM. NOWADAYS, LINUX USERS CAN DOWNLOAD THOUSANDS OF FREE PROGRAMS DEVELOPED BY COUNTLESS PROGRAMMERS FROM AROUND THE WORLD. THE FREE SOFTWARE COMMUNITY MAKES SOFTWARE THAT ANYONE CAN HAVE AND USE.
SKRIITCH!
THAT'S NEAT. AND YOU CAN USE IT WITH MASTERSOFT?
NO, LINUX IS AN ALTERNATIVE TO MASTERSOFT. MOST EVERYTHING YOU CAN DO WITH A COMPUTER USING MASTERSOFT CAN BE DONE ON A COMPUTER RUNNING LINUX, OFTEN BETTER AND WITH LESS SOFTWARE EXPENSES.
I SEE. SO, WHO MAKES LINUX?
WELL, NO SINGLE COMPANY OR GROUP MAKES LINUX.

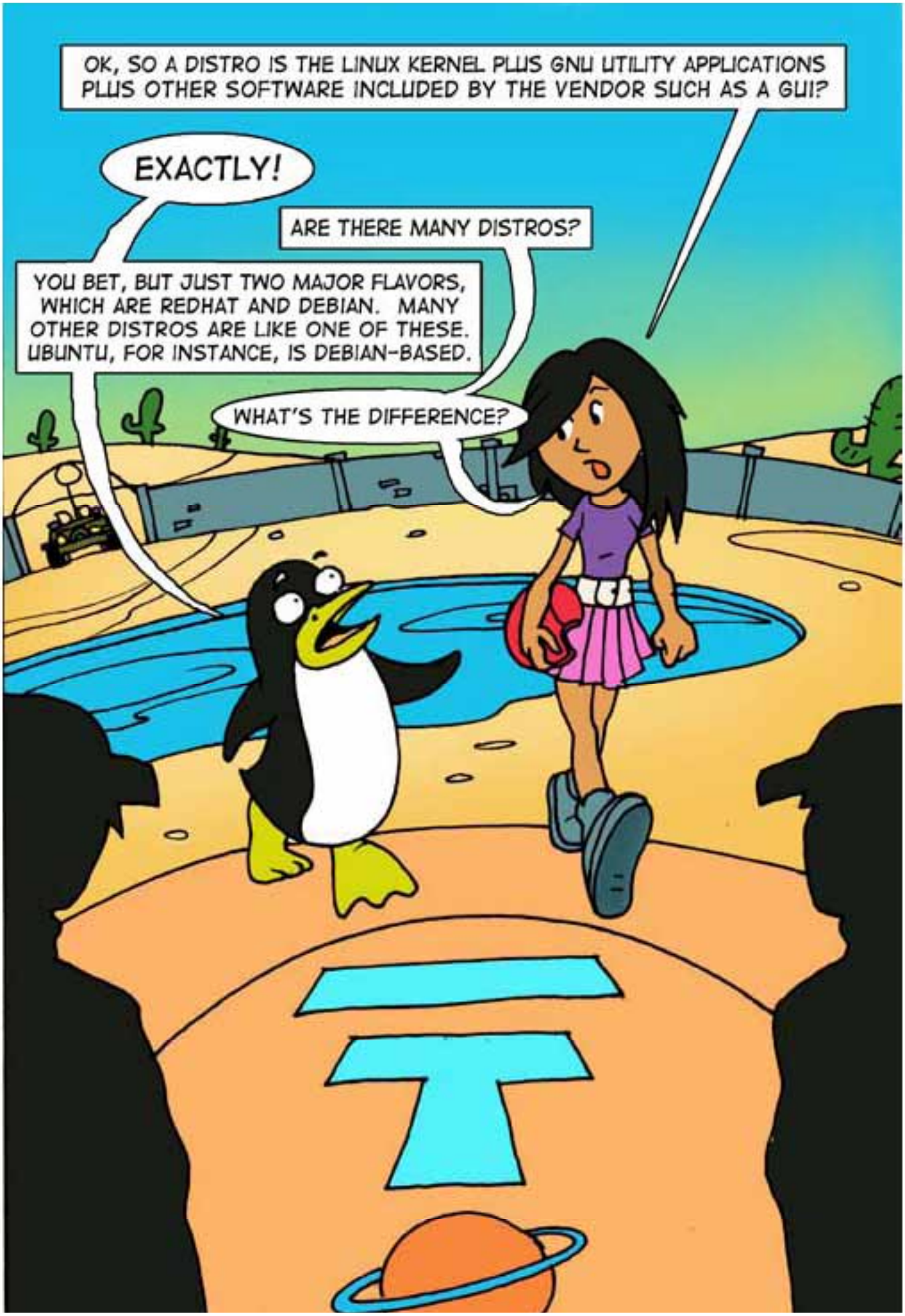

YOU SEE, KAORI, LINUX IS ACTUALLY JUST PART OF THE OPERATING SYSTEM. LINUX IS THE KERNEL, BUT YOU CAN'T FORGET ABOUT GNU.
GNU?
UNIX UNIX
YEAH. GNU: IT STANDS FOR GNU'S NOT UNIX. WAY BACK IN THE 1960S, A CORPORATE RESEARCH LAB DEVELOPED AN OPERATING SYSTEM CALLED UNIX. THROUGH THE YEARS, IT BECAME DIFFICULT TO SIMPLY USE A UNIX SYSTEM BECAUSE OF ALL THE VARIOUS CONTRACTS AND COPYRIGHTS ASSOCIATED WITH IT.
software license
you get: a
we get: you
software license
you get: access
we get: your soul


BY THE EARLY 1980S, A NUMBER OF PROGRAMMERS WERE COLLABORATING ON AN ALTERNATIVE PLATFORM THAT WOULD BE COMPATIBLE WITH UNIX AND FREELY AVAILABLE WITHOUT COMPLICATED AND RESTRICTIVE LICENSING. THIS EFFORT BECAME KNOWN AS THE GNU PROJECT, AND PROGRAMMERS CAME OUT OF THE WOODWORK TO PARTICIPATE IN IT.
GNU
THE GNU PROJECT CONTRIBUTORS BEGAN TO DEVELOP SIMPLE TOOLS TO REPLACE ALL THE VARIOUS UNIX PROGRAMS. BACK THEN, UNIX WAS NOT AN OPERATING SYSTEM LIKE YOU MIGHT THINK OF ONE TODAY.
EVERYTHING WAS COMPLETELY TEXT-BASED, AND THESE SIMPLE GNU TOOLS WERE FOR WHAT WE WOULD CONSIDER PRETTY BASIC TASKS, SUCH AS NAVIGATING AROUND FOLDERS AND DISPLAYING FILE CONTENTS IN TEXT FORMAT."


FROM THE EARLY 80S TO THE EARLY 90S, THE GNU PROJECT DEVELOPERS CREATED HUNDREDS OF PROGRAMS, BUT THEY STILL DIDN'T HAVE A COMPLETE OPERATING SYSTEM BECAUSE THEY LACKED THE ELEMENT THAT GETS THE TOOLS WORKING TOGETHER: THE KERNEL.
THE OPERATING SYSTEM KERNEL IS A KEY ELEMENT SINCE IT HANDLES SYSTEM-LEVEL TASKS LIKE MEMORY MANAGEMENT AND HARDWARE/SOFTWARE INTERACTION.
WHILE THE OFFICIAL GNU PROJECT KERNEL WAS STILL UNDER CONSTRUCTION IN 1992, A UNIVERSITY STUDENT DEVELOPED HIS OWN KERNEL CALLED LINUX THAT WOULD WORK WITH THE VARIOUS EXISTING GNU UTILITIES.
LINUX WAS MADE FREELY AVAILABLE UNDER THE GNU GENERAL PUBLIC LICENSE (GPL), AND THE TWO HAVE BEEN A PACKAGE DEAL EVER SINCE. IN FACT, SOME PEOPLE STILL REFER TO THE OPERATING SYSTEM AS GNU LINUX.

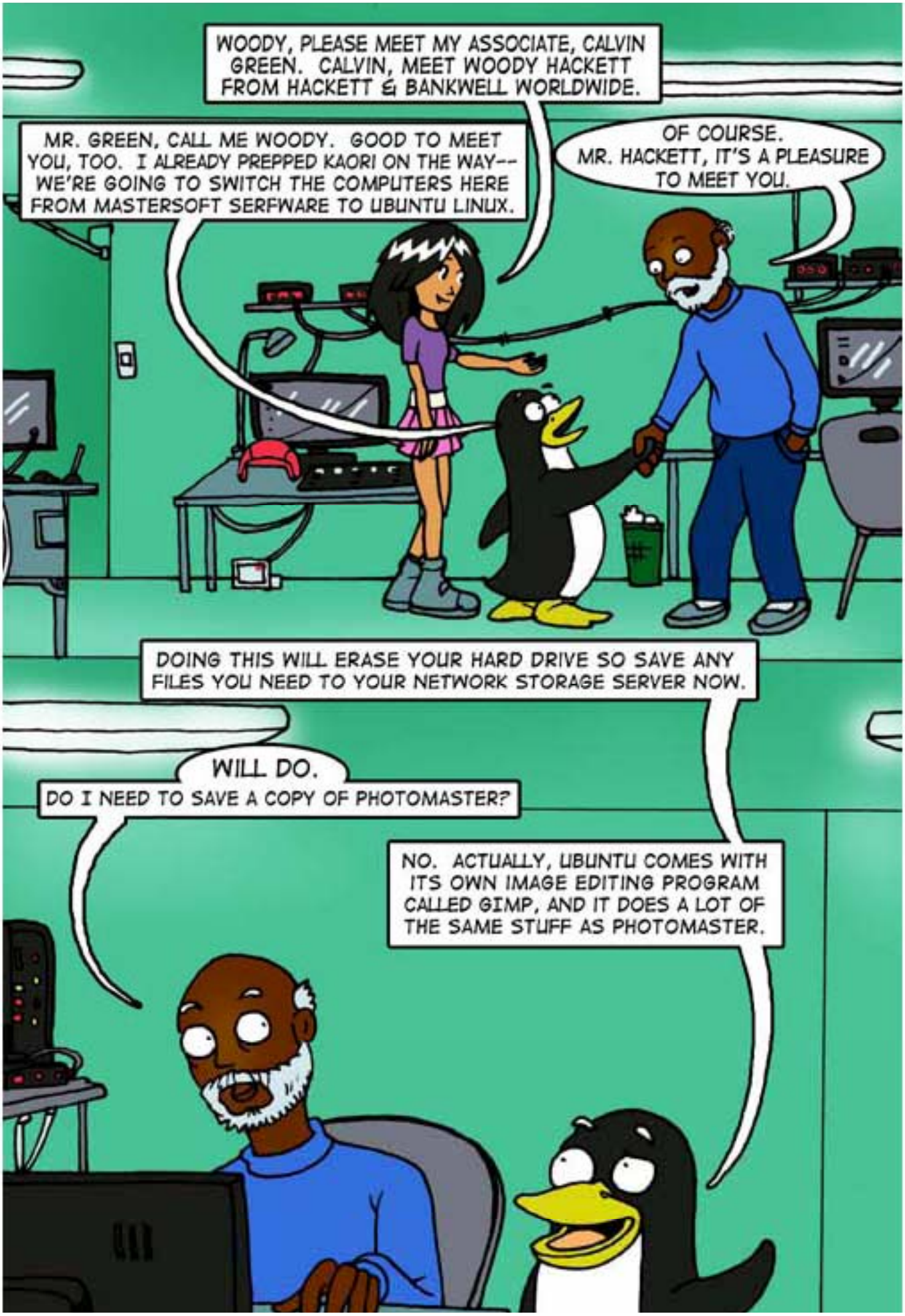

DO I HAVE TO KNOW ALL THIS TO USE LINUX? IT SEEMS AWFULLY CONFUSING. THERE'S A GRAPHICAL MODE, RIGHT?
DON'T WORRY, KAORI. RIGHT NOW IT SOUNDS MORE CONFUSING THAN IT REALLY IS,
AND YES, THAT MODE IS CALLED THE GRAHPICAL USER INTERFACE. WE USE UBUNTU; ITS GUI IS CALLED GNOME.
THE GOOEY? WHAT'S UBUNTU? A LINUX PROGRAM?
NOPE, UBUNTU IS A LINUX DISTRIBUTION -- OR DISTRO FOR SHORT. USUALLY, WHEN YOU GET LINUX, YOU RECEIVE IT IN THE FORM OF A DISTRO. A DISTRO CONTAINS THE LINUX KERNEL, AS WELL AS A VARIETY OF GNU UTILITY PROGRAMS.


I DON'T UNDERSTAND WHERE ALL THIS STUFF COMES FROM. HOW CAN SOME COLLEGE STUDENT'S TWENTY YEAR OLD SOFTWARE BE BETTER THAN MASTERSOFT? IS THIS EVEN IN COLOR?
YOU BET, KAORI. IT'S FULL COLOR. NOWADAYS, THE LINUX KERNEL IS MADE OF LESS THAN 1% ORIGINAL CODE, AND A TEAM OF KERNEL DEVELOPERS WORKS TO KEEP IT FRESH AND UP-TO-DATE. A DISTRO CONTAINS THE KERNEL, SOME GNU TOOLS, AND OTHER SOFTWARE SELECTED BY THE DISTRIBUTOR. ONE OF THESE PROGRAMS IS THE GUI. UNLIKE MOST COMMERCIAL PLATFORMS, THE LINUX GUI CAN BE CHANGED OR REMOVED LIKE ANY OTHER PROGRAM.
KIND OF, BUT IT'S THE WHOLE GRAPHICAL ENVIRONMENT, NOT JUST THE DESKTOP FOLDER.
THE DESKTOP, YOU MEAN? THE DESKTOP IS A PROGRAM?


OK, SO A DISTRO IS THE LINUX KERNEL PLUS GNU UTILITY APPLICATIONS PLUS OTHER SOFTWARE INCLUDED BY THE VENDOR SUCH AS A GUI?
EXACTLY!
ARE THERE MANY DISTROS?
YOU BET, BUT JUST TWO MAJOR FLAVORS, WHICH ARE REDHAT AND DEBIAN. MANY OTHER DISTROS ARE LIKE ONE OF THESE. UBUNTU, FOR INSTANCE, IS DEBIAN-BASED.
WHAT'S THE DIFFERENCE?

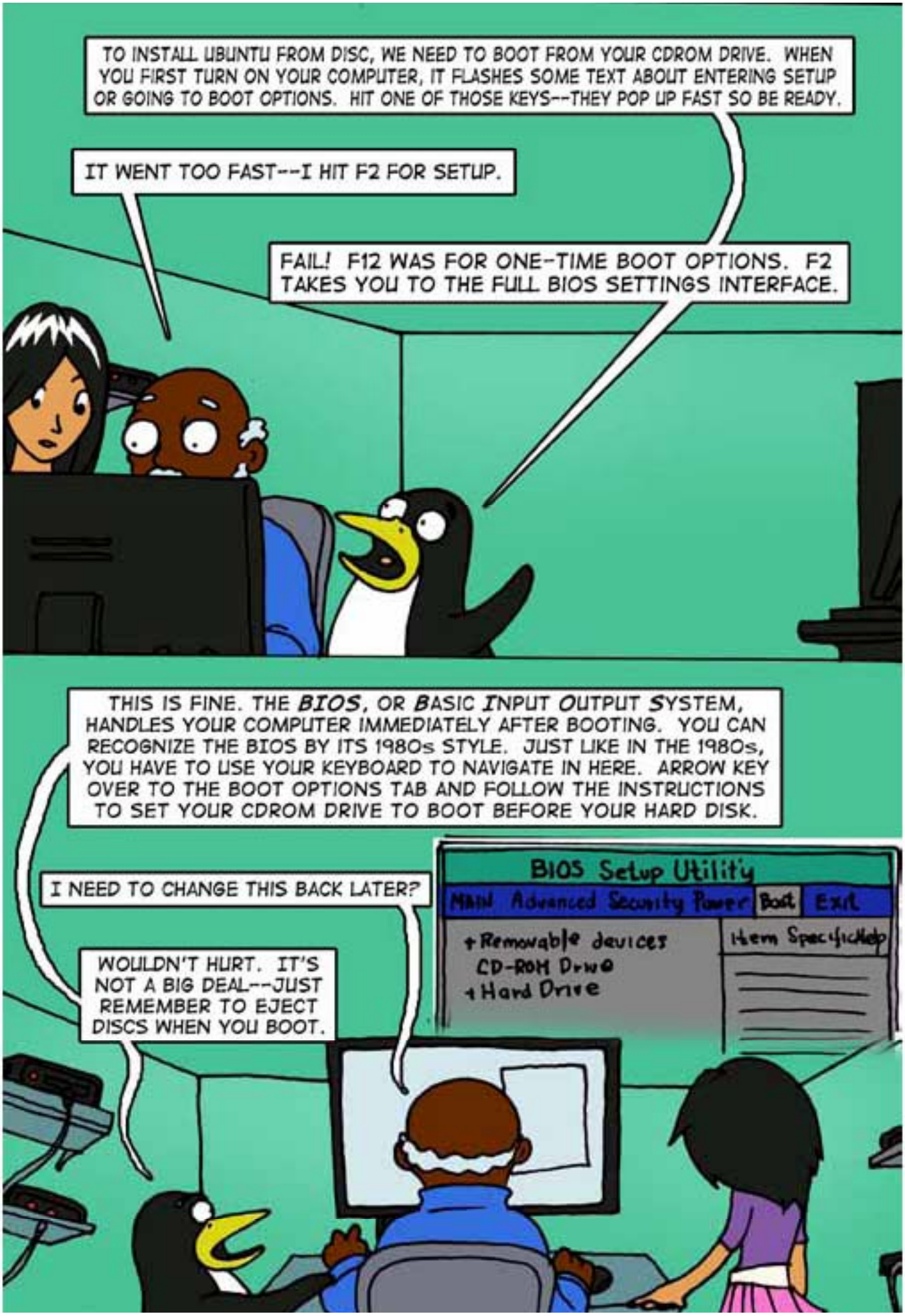

A COMPANY ON WALL STREET CALLED REDHAT INC MAKES REDHAT ENTERPRISE LINUX AND SELLS IT TO GOVERNMENTS AND OTHER BIG COMPANIES. FEDORA IS AN EXAMPLE OF A REDHAT-LIKE DISTRO SINCE IT'S BASED ON REDHAT'S LINUX. DEBIAN, ON THE OTHER HAND, IS A COMPLETELY COMMUNITY-DRIVEN DISTRO, THOUGH SOME DEBIAN-LIKE DISTROS, SUCH AS UBUNTU, DO HAVE COMMERCIAL SPONSORS.
SO WHAT'S THE DIFFERENCE?

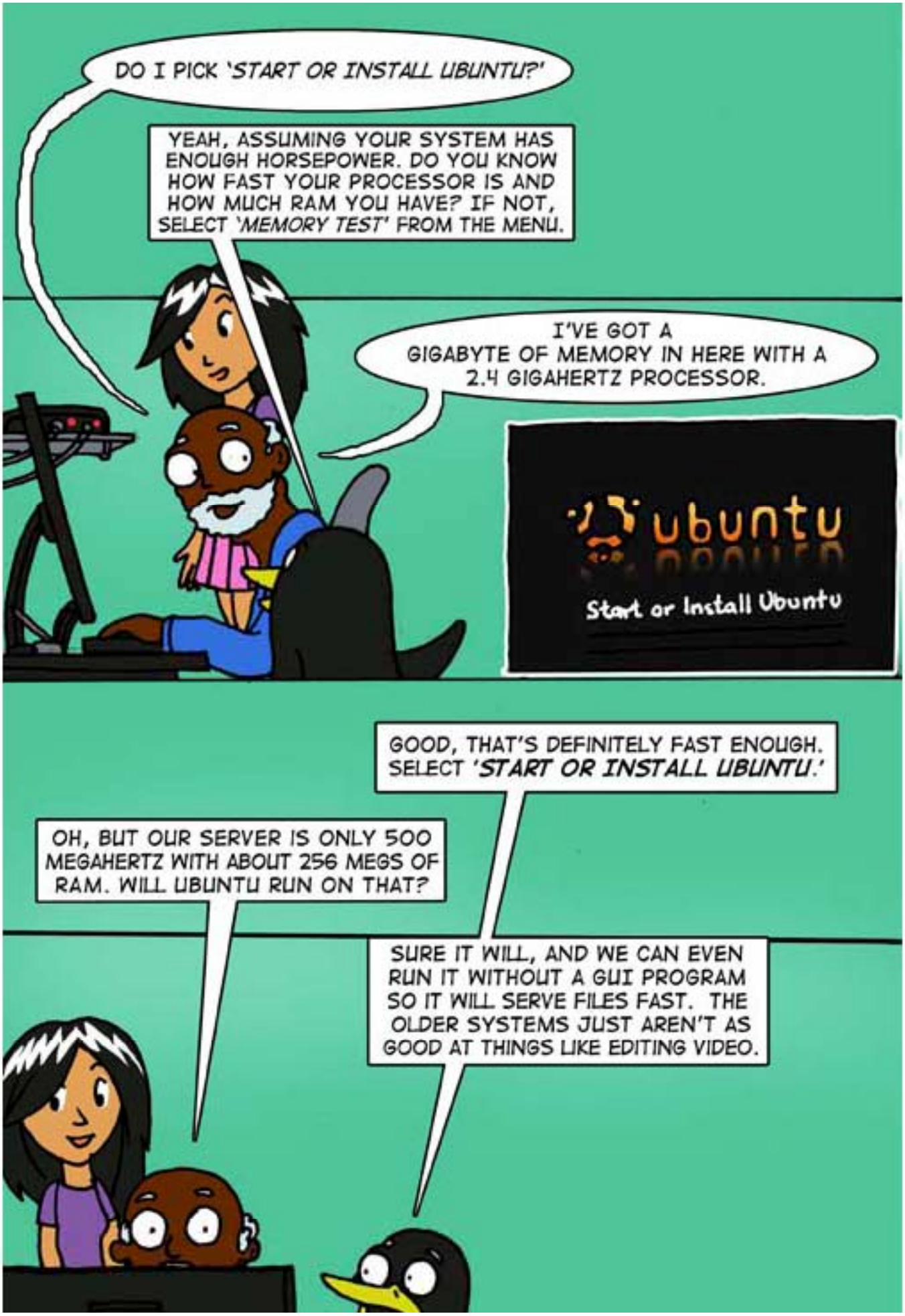

OH....WELL, THE PROGRAM THAT MANAGES PROGRAMS--THE PACKAGE MANAGER--IS DIFFERENT. THEY'RE PRETTY SIMILAR FOR USERS. WE USE UBUNTU BECAUSE IT IS WIDELY SUPPORTED ALL THROUGHOUT THE WORLD.
LET'S GET THE PARTY STARTED. WE HAVE DESKTOPS FOR PRODUCTION STUFF AND LAPTOPS FOR MARKETING STUFF. WE SAVE OUR PRODUCTION WORK TO NETWORK-BASED STORAGE.

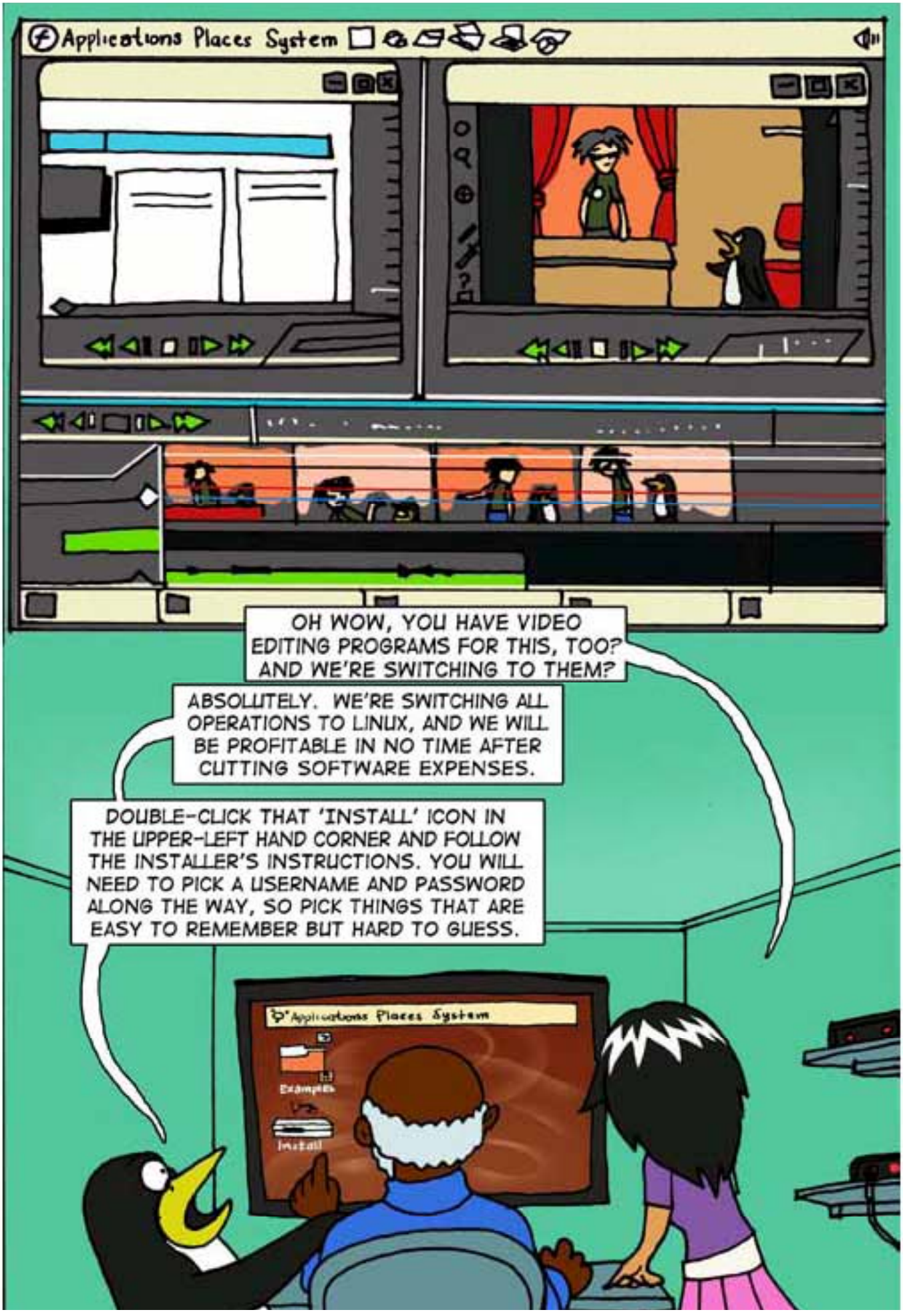

WOODY, PLEASE MEET MY ASSOCIATE, CALVIN GREEN. CALVIN, MEET WOODY HACKETT FROM HACKETT & BANKWELL WORLDWIDE.
MR. GREEN, CALL ME WOODY. GOOD TO MEET YOU, TOO. I ALREADY PREPPED KAORI ON THE WAY-- WE'RE GOING TO SWITCH THE COMPUTERS HERE FROM MASTERSOFT SERFWARE TO UBUNTU LINUX.
OF COURSE. MR. HACKETT, IT'S A PLEASURE TO MEET YOU.
DOING THIS WILL ERASE YOUR HARD DRIVE SO SAVE ANY FILES YOU NEED TO YOUR NETWORK STORAGE SERVER NOW.
WILL DO.
DO I NEED TO SAVE A COPY OF PHOTOMASTER?
NO. ACTUALLY, UBUNTU COMES WITH ITS OWN IMAGE EDITING PROGRAM CALLED GIMP, AND IT DOES A LOT OF THE SAME STUFF AS PHOTOMASTER.

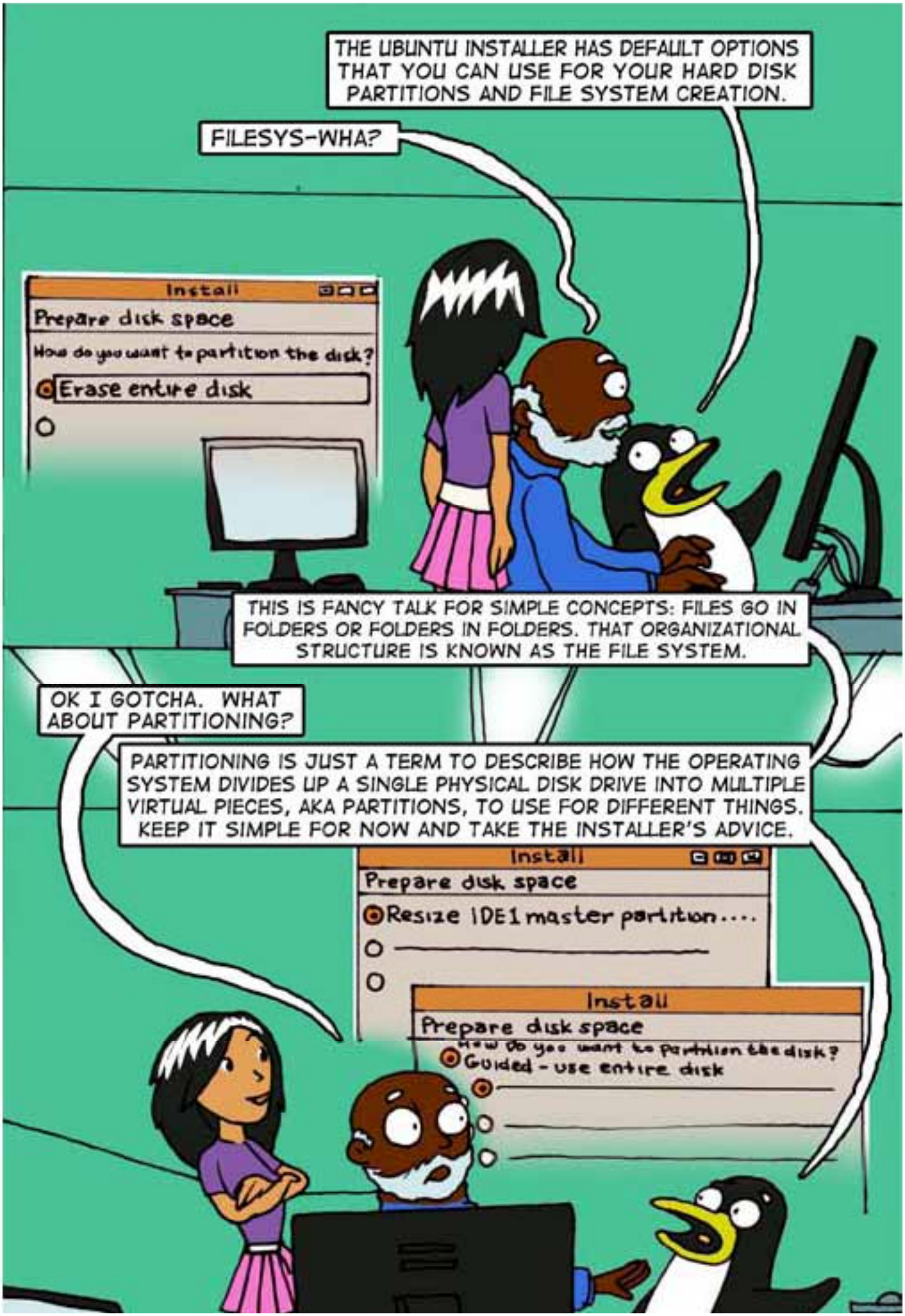

OK, I'LL GIVE IT A SHOT. BRING OUT THE GIMP!
NOT 'THE' GIMP-- JUST GIMP. IT STANDS FOR GNU IMAGE MANIPULATION PROGRAM. IT'S ONE OF THE PROGRAMS FROM THE GNU PROJECT.
THE WHO PROJECT?
DON'T WORRY ABOUT IT, CALVIN. YOU DON'T NEED TO KNOW THE HISTORICAL DETAILS TO USE THE PROGRAM. RIGHT, WOODY?
SURE, BUT YOU'LL PICK EM UP SOONER OR LATER SO DON'T FIGHT IT.

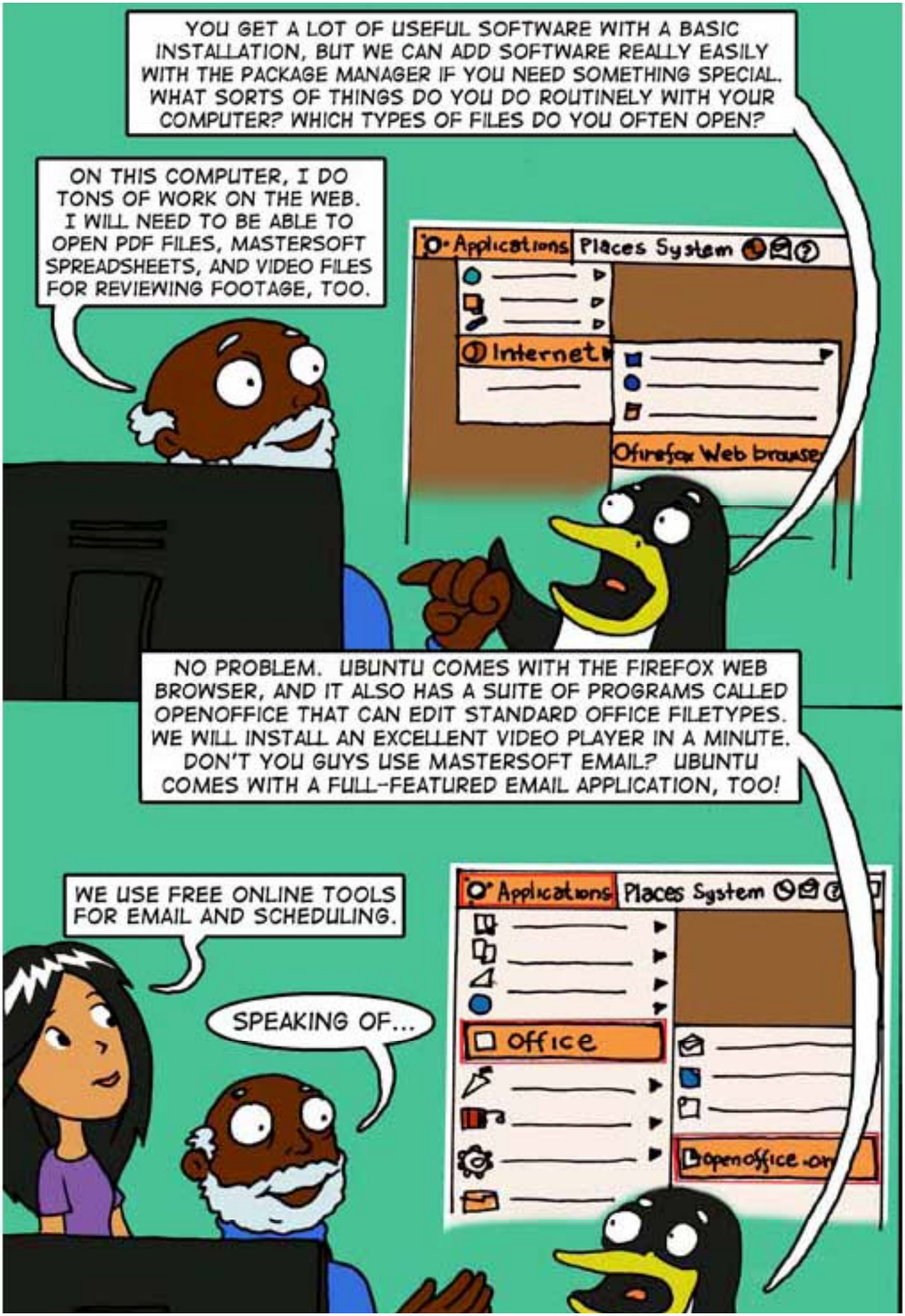

OK, I'M DONE WITH THE BACKUP, BUT WHAT ABOUT KAORI'S LAPTOP? IT DOESN'T CONNECT TO OUR NETWORK STORAGE.
OOPS, I FORGOT ABOUT THAT!
I HAVE A USB THUMB DRIVE WE CAN USE FOR THAT; I HATE TO BURN CDS BECAUSE IT'S SO WASTEFUL... YOU KNOW, BAD FOR THE ENVIRONMENT, I MEAN.
OK, GOOD, WE CAN DEAL WITH THAT LATER. HOW DO WE INSTALL UBUNTU?
WE USE THIS CD I BURNED.
ubuntu

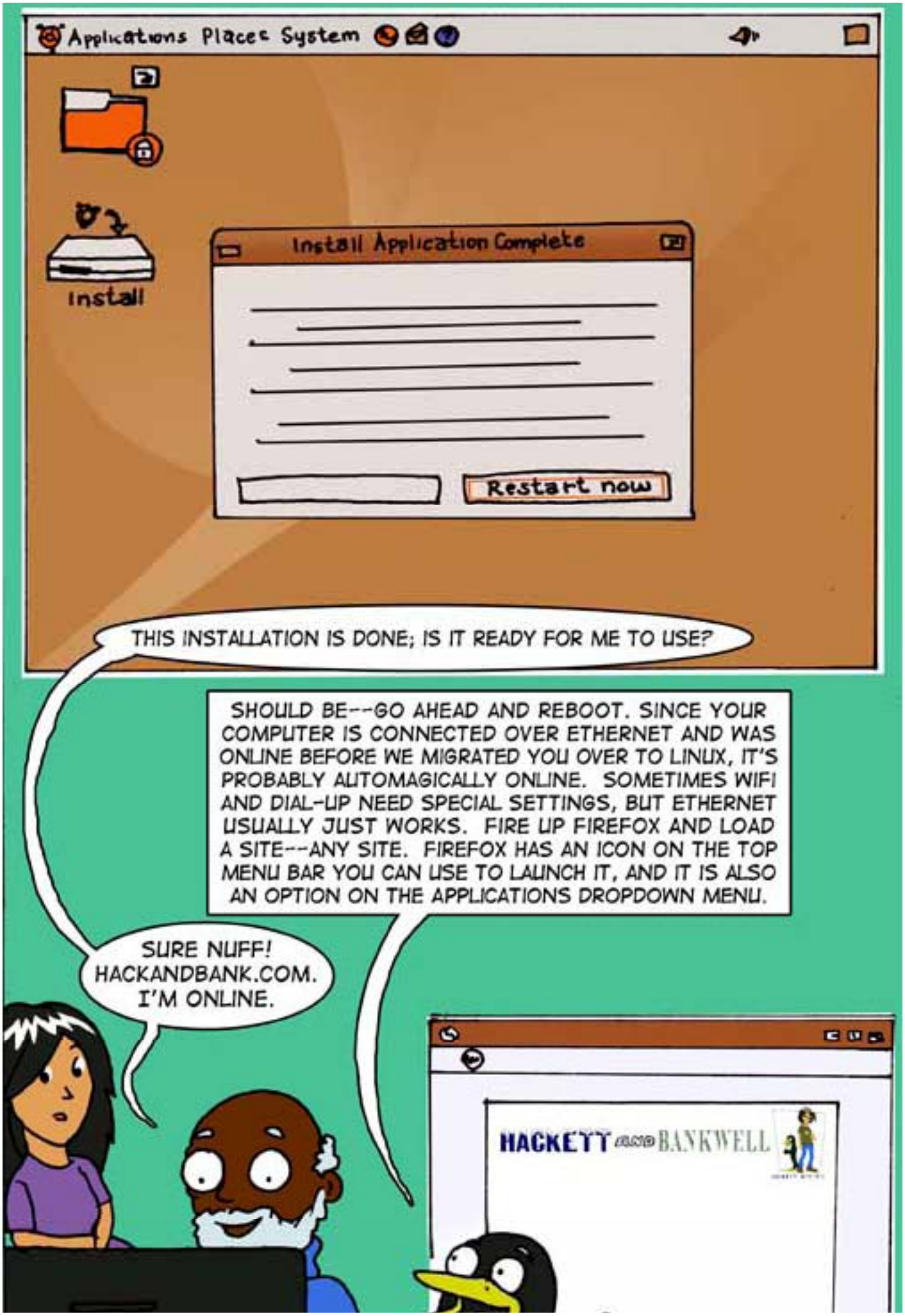

TO INSTALL UBUNTU FROM DISC, WE NEED TO BOOT FROM YOUR CDROM DRIVE. WHEN YOU FIRST TURN ON YOUR COMPUTER, IT FLASHES SOME TEXT ABOUT ENTERING SETUP OR GOING TO BOOT OPTIONS. HIT ONE OF THOSE KEYS--THEY POP UP FAST SO BE READY.
IT WENT TOO FAST--I HIT F2 FOR SETUP.
FAIL! F12 WAS FOR ONE-TIME BOOT OPTIONS. F2 TAKES YOU TO THE FULL BIOS SETTINGS INTERFACE.
THIS IS FINE. THE BIOS, OR BASIC INPUT OUTPUT SYSTEM, HANDLES YOUR COMPUTER IMMEDIATELY AFTER BOOTING. YOU CAN RECOGNIZE THE BIOS BY ITS 1980s STYLE. JUST LIKE IN THE 1980s, YOU HAVE TO USE YOUR KEYBOARD TO NAVIGATE IN HERE. ARROW KEY OVER TO THE BOOT OPTIONS TAB AND FOLLOW THE INSTRUCTIONS TO SET YOUR CDROM DRIVE TO BOOT BEFORE YOUR HARD DISK.
I NEED TO CHANGE THIS BACK LATER?
WOULDN'T HURT. IT'S NOT A BIG DEAL--JUST REMEMBER TO EJECT DISCS WHEN YOU BOOT.
BIOS Setup Utility
Main Advanced Security Power Boot Exit
+Removable devices
CD-ROM Drive
+Hard Drive
Item Specific Help

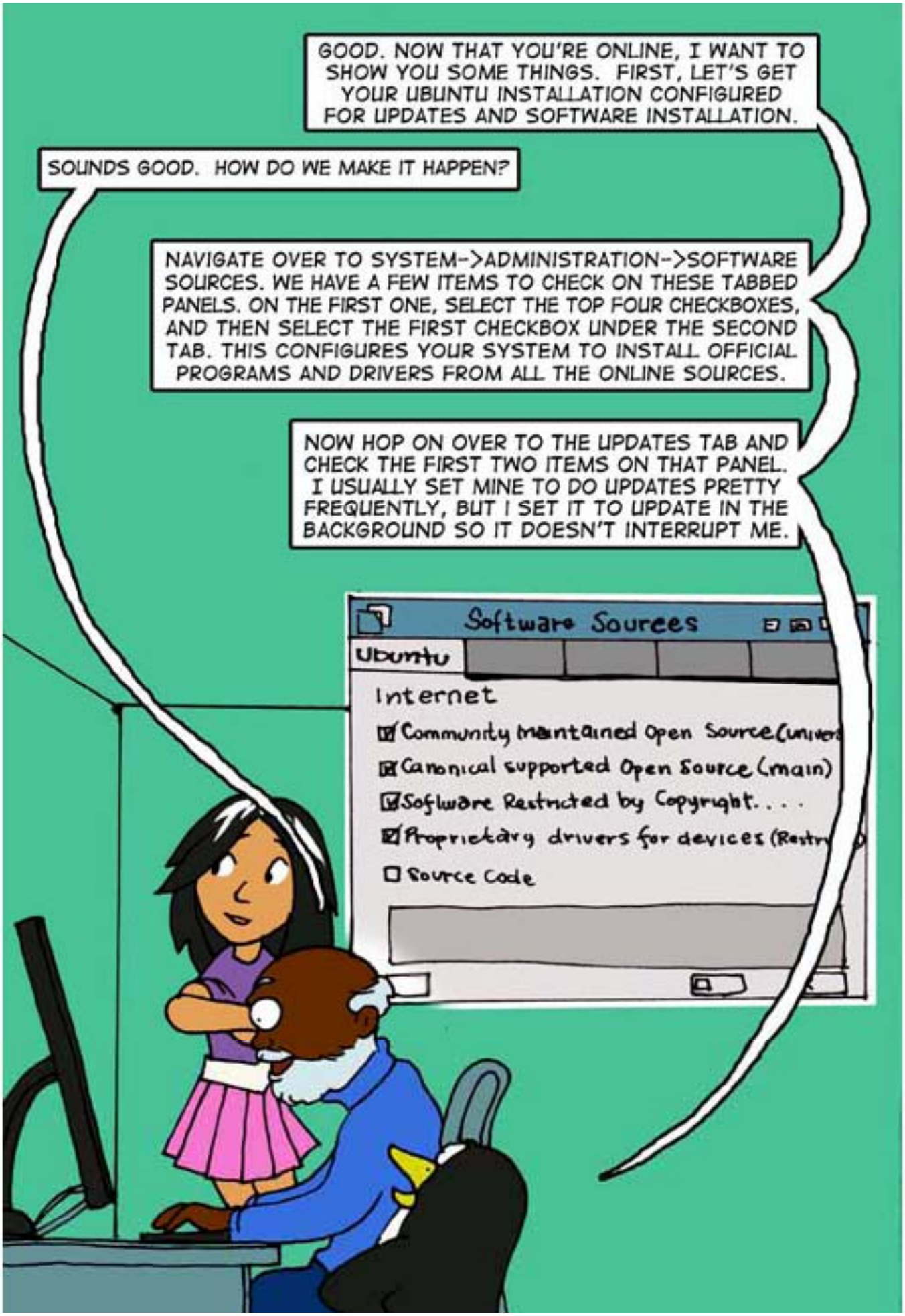

DO I PICK 'START OR INSTALL UBUNTU?'
YEAH, ASSUMING YOUR SYSTEM HAS ENOUGH HORSEPOWER. DO YOU KNOW HOW FAST YOUR PROCESSOR IS AND HOW MUCH RAM YOU HAVE? IF NOT, SELECT 'MEMORY TEST' FROM THE MENU.
I'VE GOT A GIGABYTE OF MEMORY IN HERE WITH A 2.4 GIGAHERTZ PROCESSOR.
ubuntu
Start or Install Ubuntu
GOOD, THAT'S DEFINITELY FAST ENOUGH. SELECT 'START OR INSTALL UBUNTU.'
OH, BUT OUR SERVER IS ONLY 500 MEGAHERTZ WITH ABOUT 256 MEGS OF RAM. WILL UBUNTU RUN ON THAT?
SURE IT WILL, AND WE CAN EVEN RUN IT WITHOUT A GUI PROGRAM SO IT WILL SERVE FILES FAST. THE OLDER SYSTEMS JUST AREN'T AS GOOD AT THINGS LIKE EDITING VIDEO.

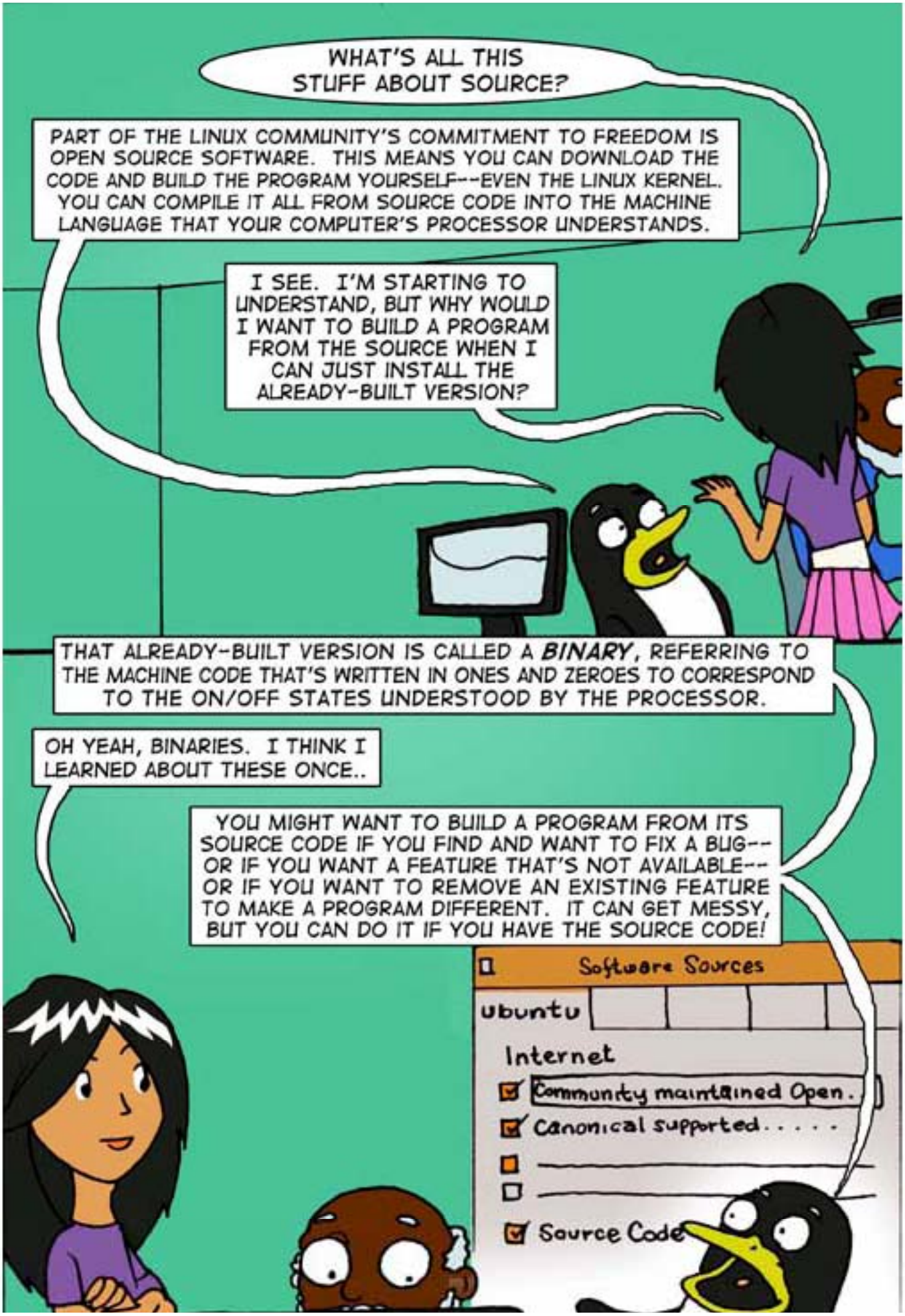

Applications Places System
OH WOW, YOU HAVE VIDEO EDITING PROGRAMS FOR THIS, TOO? AND WE'RE SWITCHING TO THEM?
ABSOLUTELY. WE'RE SWITCHING ALL OPERATIONS TO LINUX, AND WE WILL BE PROFITABLE IN NO TIME AFTER CUTTING SOFTWARE EXPENSES.
DOUBLE-CLICK THAT 'INSTALL' ICON IN THE UPPER-LEFT HAND CORNER AND FOLLOW THE INSTALLER'S INSTRUCTIONS. YOU WILL NEED TO PICK A USERNAME AND PASSWORD ALONG THE WAY, SO PICK THINGS THAT ARE EASY TO REMEMBER BUT HARD TO GUESS.
Applications Places System
Examples
Install


THE UBUNTU INSTALLER HAS DEFAULT OPTIONS THAT YOU CAN USE FOR YOUR HARD DISK PARTITIONS AND FILE SYSTEM CREATION.
FILESYS-WHA?
Install
Prepare disk space
How do you want to partition the disk?
Erase entire disk
THIS IS FANCY TALK FOR SIMPLE CONCEPTS: FILES GO IN FOLDERS OR FOLDERS IN FOLDERS. THAT ORGANIZATIONAL STRUCTURE IS KNOWN AS THE FILE SYSTEM.
OK I GOTCHA. WHAT ABOUT PARTITIONING?
PARTITIONING IS JUST A TERM TO DESCRIBE HOW THE OPERATING SYSTEM DIVIDES UP A SINGLE PHYSICAL DISK DRIVE INTO MULTIPLE VIRTUAL PIECES, AKA PARTITIONS, TO USE FOR DIFFERENT THINGS. KEEP IT SIMPLE FOR NOW AND TAKE THE INSTALLER'S ADVICE.
Install
Prepare disk space
Resize IDE1 master partition....
Install
Prepare disk space
How do you want to partition the disk?
Guided - use entire disk

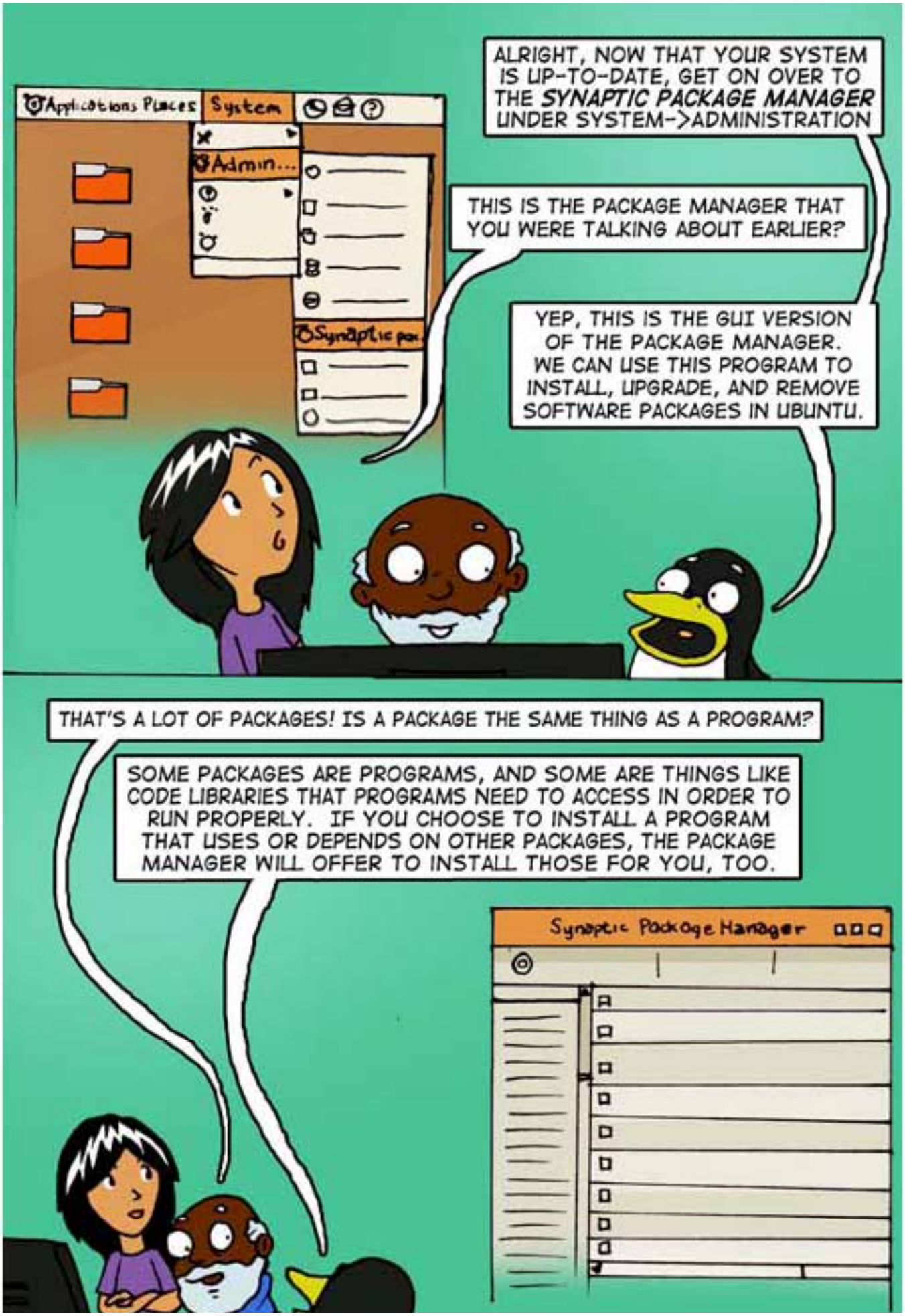

YOU GET A LOT OF USEFUL SOFTWARE WITH A BASIC INSTALLATION, BUT WE CAN ADD SOFTWARE REALLY EASILY WITH THE PACKAGE MANAGER IF YOU NEED SOMETHING SPECIAL. WHAT SORTS OF THINGS DO YOU DO ROUTINELY WITH YOUR COMPUTER? WHICH TYPES OF FILES DO YOU OFTEN OPEN?
ON THIS COMPUTER, I DO TONS OF WORK ON THE WEB. I WILL NEED TO BE ABLE TO OPEN PDF FILES, MASTERSOFT SPREADSHEETS, AND VIDEO FILES FOR REVIEWING FOOTAGE, TOO.
Applications
Places
System
Internet
Firefox Web browser
NO PROBLEM. UBUNTU COMES WITH THE FIREFOX WEB BROWSER, AND IT ALSO HAS A SUITE OF PROGRAMS CALLED OPENOFFICE THAT CAN EDIT STANDARD OFFICE FILETYPES. WE WILL INSTALL AN EXCELLENT VIDEO PLAYER IN A MINUTE. DON'T YOU GUYS USE MASTERSOFT EMAIL? UBUNTU COMES WITH A FULL-FEATURED EMAIL APPLICATION, TOO!
WE USE FREE ONLINE TOOLS FOR EMAIL AND SCHEDULING.
SPEAKING OF...
Applications
Places
System
Office
Openoffice.or


Applications Places System
Install
Install Application Complete
Restart now
THIS INSTALLATION IS DONE; IS IT READY FOR ME TO USE?
SHOULD BE--GO AHEAD AND REBOOT. SINCE YOUR COMPUTER IS CONNECTED OVER ETHERNET AND WAS ONLINE BEFORE WE MIGRATED YOU OVER TO LINUX, IT'S PROBABLY AUTOMAGICALLY ONLINE. SOMETIMES WIFI AND DIAL-UP NEED SPECIAL SETTINGS, BUT ETHERNET USUALLY JUST WORKS. FIRE UP FIREFOX AND LOAD A SITE--ANY SITE. FIREFOX HAS AN ICON ON THE TOP MENU BAR YOU CAN USE TO LAUNCH IT, AND IT IS ALSO AN OPTION ON THE APPLICATIONS DROPDOWN MENU.
SURE NUFF! HACKANDBANK.COM. I'M ONLINE.
HACKETT AND BANKWELL

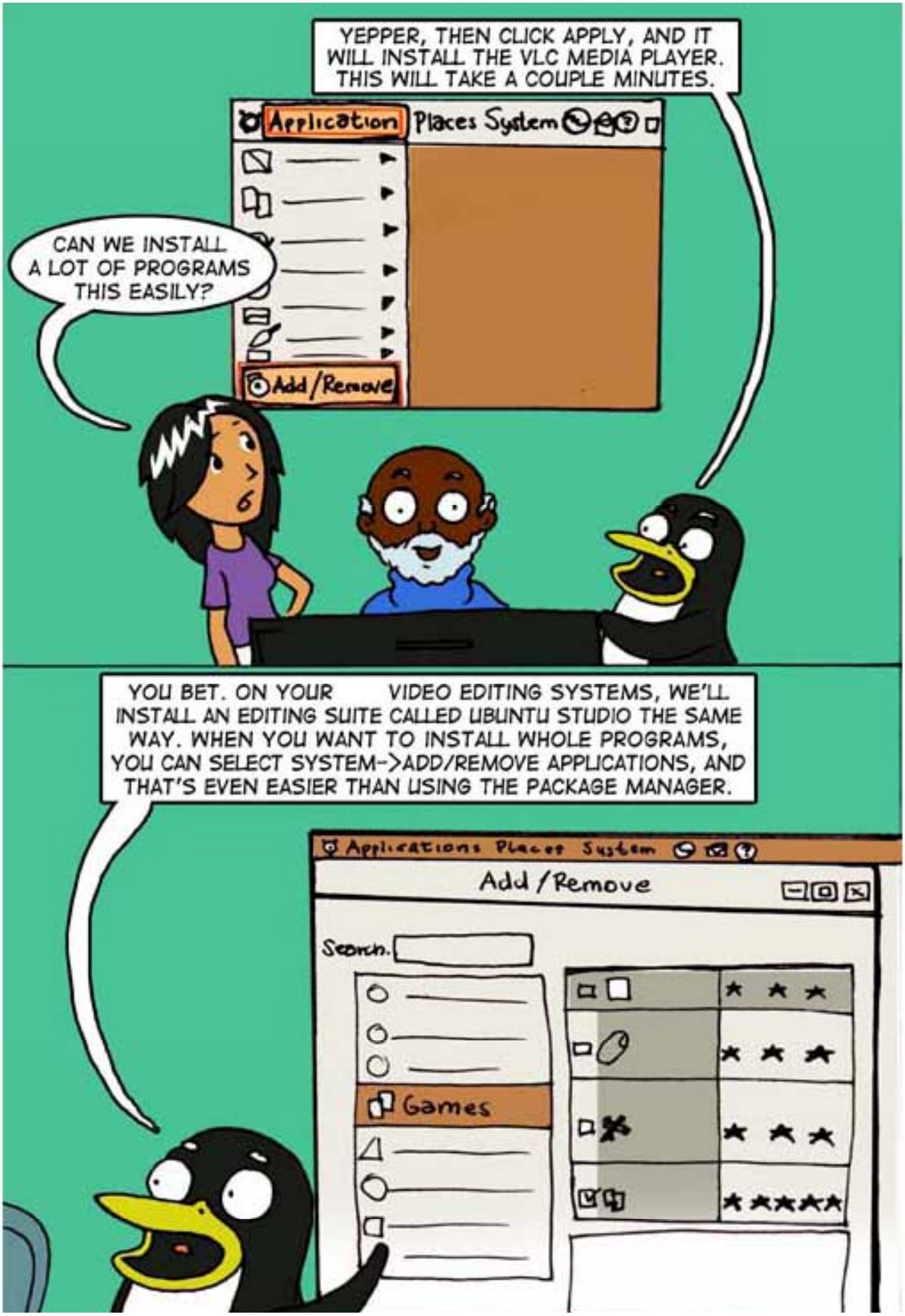

GOOD. NOW THAT YOU'RE ONLINE, I WANT TO SHOW YOU SOME THINGS. FIRST, LET'S GET YOUR UBUNTU INSTALLATION CONFIGURED FOR UPDATES AND SOFTWARE INSTALLATION.
SOUNDS GOOD. HOW DO WE MAKE IT HAPPEN?
NAVIGATE OVER TO SYSTEM->ADMINISTRATION->SOFTWARE SOURCES. WE HAVE A FEW ITEMS TO CHECK ON THESE TABBED PANELS. ON THE FIRST ONE, SELECT THE TOP FOUR CHECKBOXES, AND THEN SELECT THE FIRST CHECKBOX UNDER THE SECOND TAB. THIS CONFIGURES YOUR SYSTEM TO INSTALL OFFICIAL PROGRAMS AND DRIVERS FROM ALL THE ONLINE SOURCES.
NOW HOP ON OVER TO THE UPDATES TAB AND CHECK THE FIRST TWO ITEMS ON THAT PANEL. I USUALLY SET MINE TO DO UPDATES PRETTY FREQUENTLY, BUT I SET IT TO UPDATE IN THE BACKGROUND SO IT DOESN'T INTERRUPT ME.
Software Sources
Ubuntu
Internet
Community maintained Open Source (univers
Canonical supported Open Source (main)
Software Restricted by Copyright. . . .
Proprietary drivers for devices (Restr
Source Code

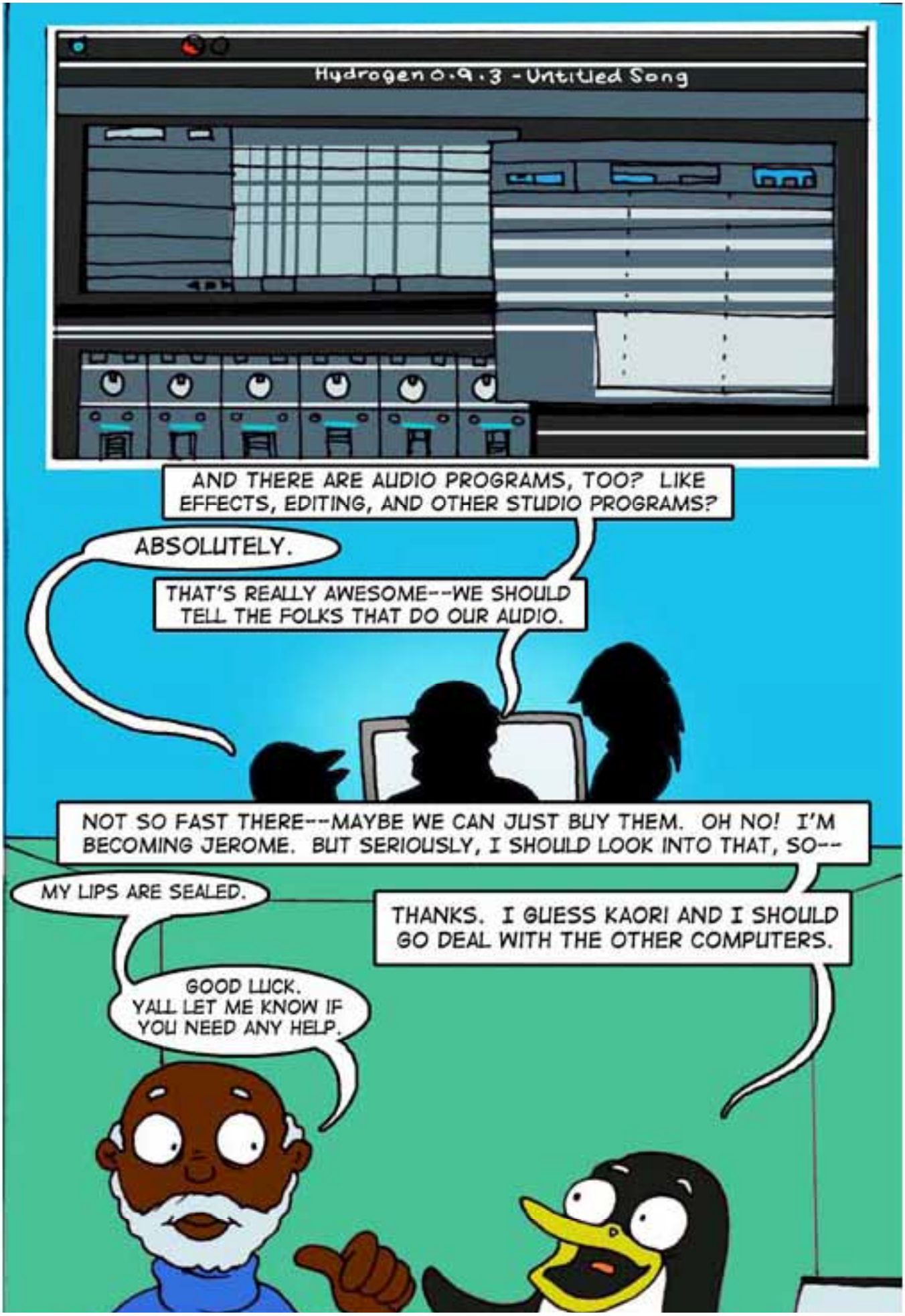

WHAT'S ALL THIS STUFF ABOUT SOURCE?
PART OF THE LINUX COMMUNITY'S COMMITMENT TO FREEDOM IS OPEN SOURCE SOFTWARE. THIS MEANS YOU CAN DOWNLOAD THE CODE AND BUILD THE PROGRAM YOURSELF--EVEN THE LINUX KERNEL. YOU CAN COMPILE IT ALL FROM SOURCE CODE INTO THE MACHINE LANGUAGE THAT YOUR COMPUTER'S PROCESSOR UNDERSTANDS.
I SEE. I'M STARTING TO UNDERSTAND, BUT WHY WOULD I WANT TO BUILD A PROGRAM FROM THE SOURCE WHEN I CAN JUST INSTALL THE ALREADY-BUILT VERSION?
THAT ALREADY-BUILT VERSION IS CALLED A BINARY, REFERRING TO THE MACHINE CODE THAT'S WRITTEN IN ONES AND ZEROES TO CORRESPOND TO THE ON/OFF STATES UNDERSTOOD BY THE PROCESSOR.
OH YEAH, BINARIES. I THINK I LEARNED ABOUT THESE ONCE..
YOU MIGHT WANT TO BUILD A PROGRAM FROM ITS SOURCE CODE IF YOU FIND AND WANT TO FIX A BUG-- OR IF YOU WANT A FEATURE THAT'S NOT AVAILABLE-- OR IF YOU WANT TO REMOVE AN EXISTING FEATURE TO MAKE A PROGRAM DIFFERENT. IT CAN GET MESSY, BUT YOU CAN DO IT IF YOU HAVE THE SOURCE CODE!
Software Sources
ubuntu
Internet
Community maintained Open.
Canonical supported.....
Source Code

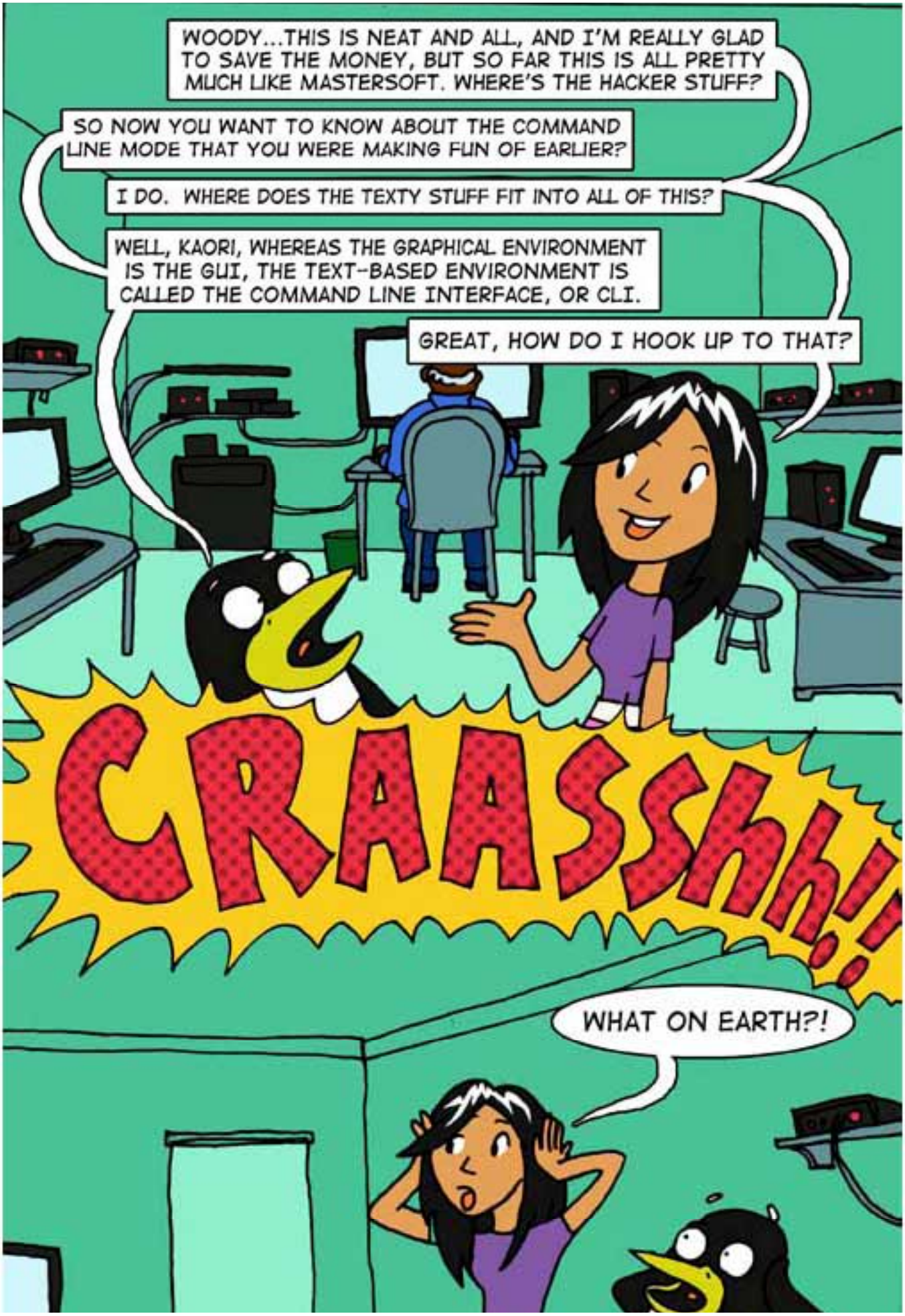

BEFORE WE INSTALL ANY PROGRAMS, LET'S DO YOUR ACTUAL UPDATE FIRST. WE SET ALL THE SOURCES, BUT WE HAVEN'T DONE THE UPDATE ITSELF. THE PACKAGE MANAGER WORKS JUST LIKE THE UPDATE MANAGER, SO ONCE WE'VE DONE THIS, USING THE PACKAGE MANAGER WILL BE A BREEZE. IF YOU SEE AN UPDATE MESSAGE POP UP IN THE UPPER RIGHT-HAND CORNER, YOU CAN CLICK IT TO GET TO THE UPDATE MANAGER. OTHERWISE, YOU CAN SELECT THE MENU ITEM SYSTEM->ADMINISTRATION->UPDATE MANAGER.
System
Administration
Update Mngr.
JUST CLICK CHECK?
YUP, SINCE WE ALREADY SPECIFIED THE REPOSITORIES FOR IT TO SEARCH FOR UPDATES AND PACKAGES, YOU JUST CLICK 'CHECK.' IT WILL PROBABLY ASK FOR YOUR PASSWORD, AND AFTER YOU ENTER THAT, THE UPDATES SHOULD START.
Software Updates
You can install 3 updates
Important security updates
Recommended updates
EASY ENOUGH.


Applications Places System
Admin...
Synaptic pac...
ALRIGHT, NOW THAT YOUR SYSTEM IS UP-TO-DATE, GET ON OVER TO THE SYNAPTIC PACKAGE MANAGER UNDER SYSTEM->ADMINISTRATION
THIS IS THE PACKAGE MANAGER THAT YOU WERE TALKING ABOUT EARLIER?
YEP, THIS IS THE GUI VERSION OF THE PACKAGE MANAGER. WE CAN USE THIS PROGRAM TO INSTALL, UPGRADE, AND REMOVE SOFTWARE PACKAGES IN UBUNTU.
THAT'S A LOT OF PACKAGES! IS A PACKAGE THE SAME THING AS A PROGRAM?
SOME PACKAGES ARE PROGRAMS, AND SOME ARE THINGS LIKE CODE LIBRARIES THAT PROGRAMS NEED TO ACCESS IN ORDER TO RUN PROPERLY. IF YOU CHOOSE TO INSTALL A PROGRAM THAT USES OR DEPENDS ON OTHER PACKAGES, THE PACKAGE MANAGER WILL OFFER TO INSTALL THOSE FOR YOU, TOO.
Synaptic Package Manager


SO WHAT DO I NEED TO INSTALL HERE?
TO WATCH ALL DIFFERENT KINDS OF VIDEO FILES, YOU SHOULD INSTALL VLC MEDIA PLAYER. SINCE YOU ALREADY SPECIFIED THE SOFTWARE SOURCES BEFORE UPDATING, YOU CAN SIMPLY CLICK 'SEARCH' IN THE PACKAGE MANAGER AND SEARCH FOR "VLC PLAYER"--THAT WILL RETURN A FEW RESULTS. RIGHT-CLICK ON THE ONE THAT'S JUST VLC AND CHOOSE TO MARK IT FOR INSTALLATION. IT WILL AUTOMATICALLY INSTALL ANY OTHER NECESSARY PACKAGES.
UM...MARK ADDITIONAL REQUIRED CHANGES?
Mark additional required changes?
to be installed
Cancel
Mark


YEPPER, THEN CLICK APPLY, AND IT WILL INSTALL THE VLC MEDIA PLAYER. THIS WILL TAKE A COUPLE MINUTES.
Application
Places
System
Add/Remove
CAN WE INSTALL A LOT OF PROGRAMS THIS EASILY?
YOU BET. ON YOUR VIDEO EDITING SYSTEMS, WE'LL INSTALL AN EDITING SUITE CALLED UBUNTU STUDIO THE SAME WAY. WHEN YOU WANT TO INSTALL WHOLE PROGRAMS, YOU CAN SELECT SYSTEM->ADD/REMOVE APPLICATIONS, AND THAT'S EVEN EASIER THAN USING THE PACKAGE MANAGER.
Applications
Places
System
Add/Remove
Search.
Games

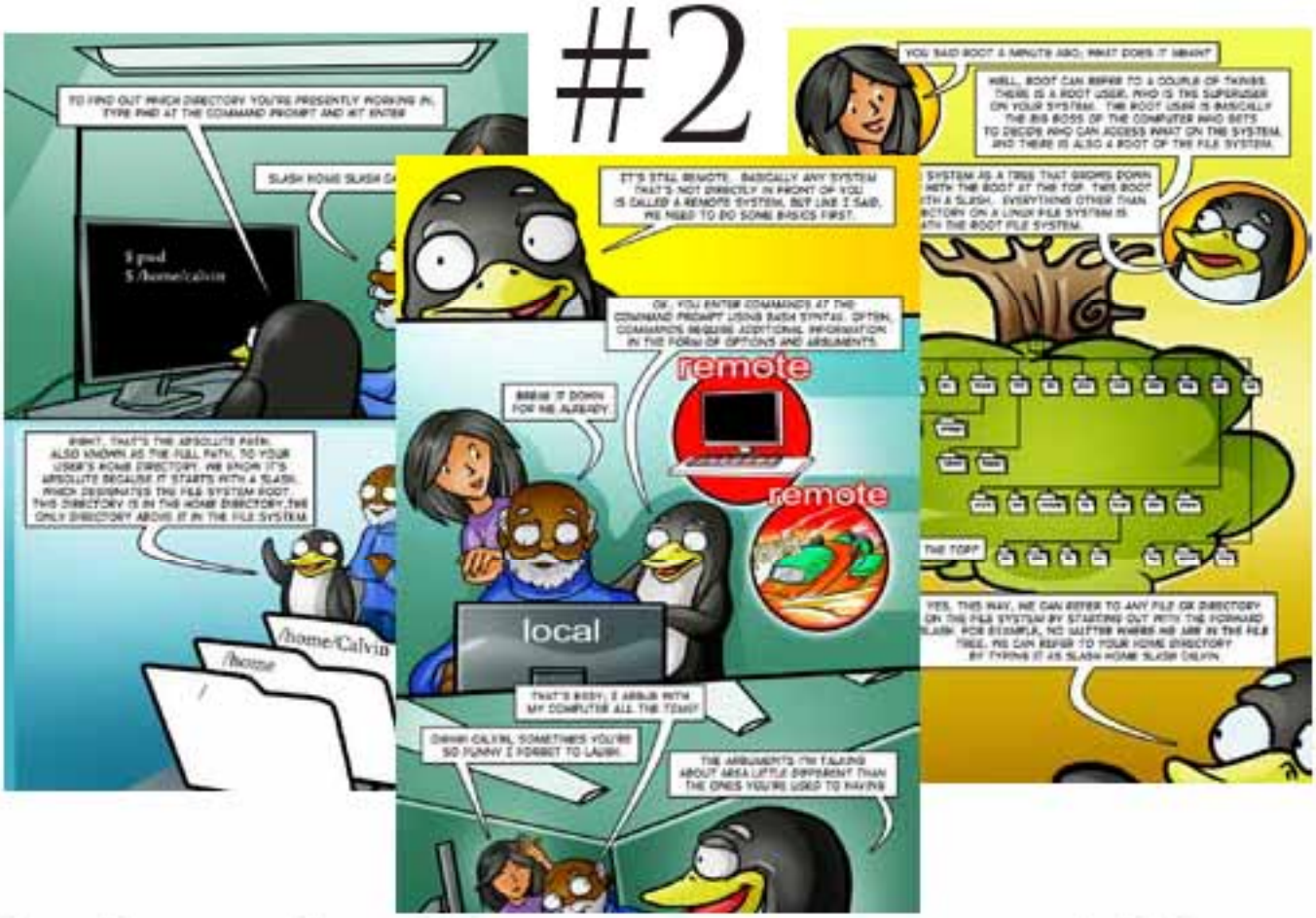

Hydrogen 0.9.3 - Untitled Song
AND THERE ARE AUDIO PROGRAMS, TOO? LIKE EFFECTS, EDITING, AND OTHER STUDIO PROGRAMS?
ABSOLUTELY.
THAT'S REALLY AWESOME--WE SHOULD TELL THE FOLKS THAT DO OUR AUDIO.
NOT SO FAST THERE--MAYBE WE CAN JUST BUY THEM. OH NO! I'M BECOMING JEROME. BUT SERIOUSLY, I SHOULD LOOK INTO THAT, SO--
MY LIPS ARE SEALED.
THANKS. I GUESS KAORI AND I SHOULD GO DEAL WITH THE OTHER COMPUTERS.
GOOD LUCK. YALL LET ME KNOW IF YOU NEED ANY HELP.


WOODY...THIS IS NEAT AND ALL, AND I'M REALLY GLAD TO SAVE THE MONEY, BUT SO FAR THIS IS ALL PRETTY MUCH LIKE MASTERSOFT. WHERE'S THE HACKER STUFF?
SO NOW YOU WANT TO KNOW ABOUT THE COMMAND LINE MODE THAT YOU WERE MAKING FUN OF EARLIER?
I DO. WHERE DOES THE TEXTY STUFF FIT INTO ALL OF THIS?
WELL, KAORI, WHEREAS THE GRAPHICAL ENVIRONMENT IS THE GUI, THE TEXT-BASED ENVIRONMENT IS CALLED THE COMMAND LINE INTERFACE, OR CLI.
GREAT, HOW DO I HOOK UP TO THAT?
CRAASSHH!!
WHAT ON EARTH?!


Puff Puff
Puff Puff

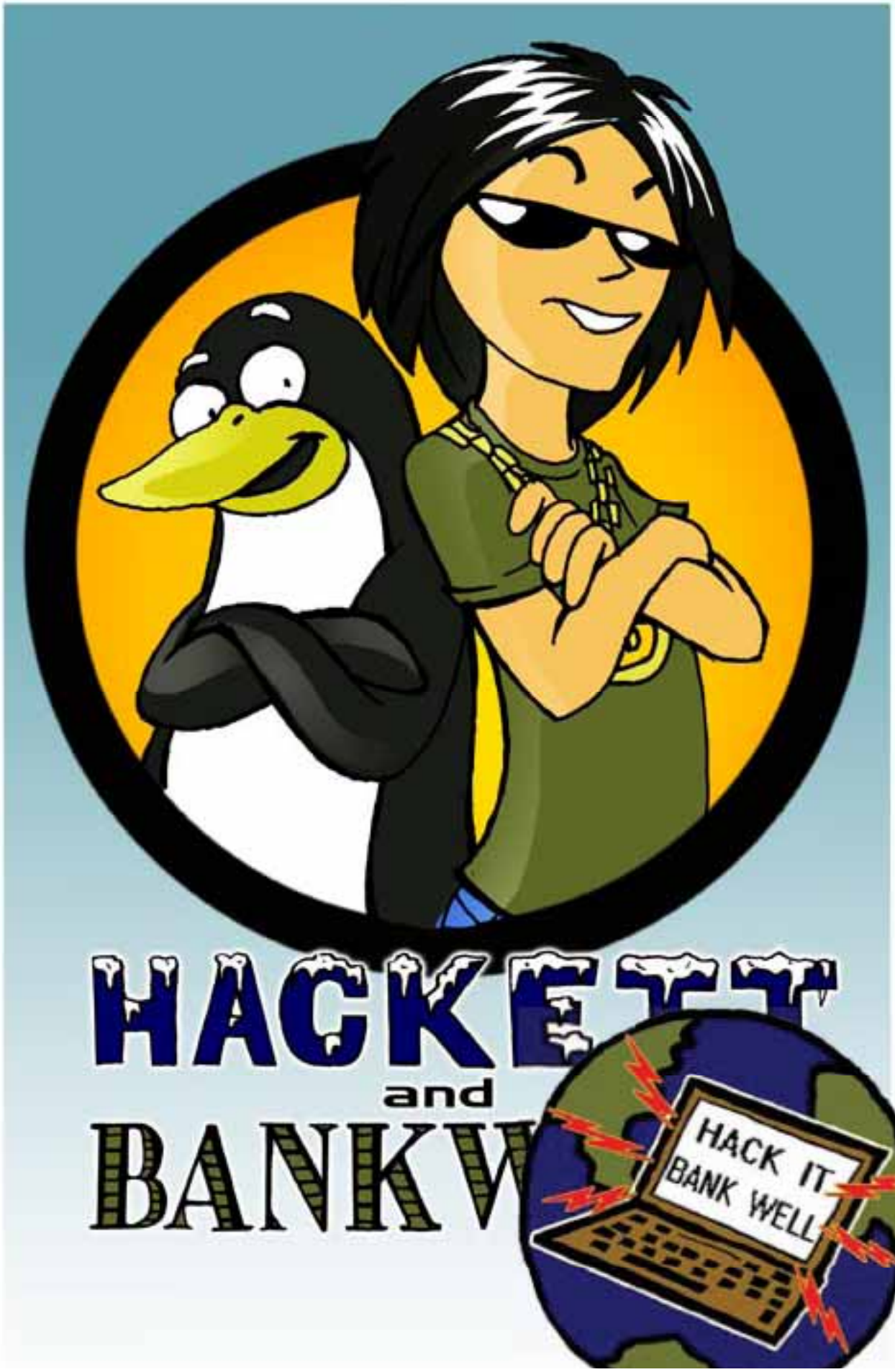
Coming Soon!

Hackett & Bankwell #2



intro to the command line




HACKE
and
BANKW
HACK IT
BANK WELL