

## **Appendix A**

## Technical Terms Used

**OTG:** On-the-go is applied to a feature that allows 'some' Android devices with USB micro to act as a host. In this level of hosting the five pin USB micro connector can communicate with data media, printers, and other standard USB devices over the specially built cable with a four pin USB-A female connector. Modern iPad and Android devices can now be purchased that feature USB-C capability. OTG and USB-C are similar in various aspects but very different.

**CAD:** Computer aided design provides the capability to develop designs and virtual models.

**CNC:** Computer numeric computer used to control movement of an object.

**OpenSource:** Software applications available to the general public under various license without cost of acquisition. The level of documentation and support varies greatly.

**Freeware:** Another term that applies to software applications available to the general public under various license without cost of acquisition. The level of documentation and support varies greatly.

**FreeCAD:** An OpenSource computer aided design tool used for creating parts for milling, laser cutting, or 3-D printing (plastic and metal components).

**LinuxCNC:** An OpenSource application which translates gcode computer commands for controlling milling, lathe, and 3-D printer movements in various axes.

**gcode:** Code that is created by computer aided design which can be read and programmed by humans. When loaded to a computer running LinuxCNC or similar applications can be parsed by CNC milling machines into repeatable milling operations.

**.RAR:** An extension of a compressed archive file similar to the commonly used .ZIP archive files.

**Ubuntu:** An OpenSource operating system build on Unix and Linux.

**Nautilus:** One of many file managers, like Windows Explorer, except it is found on computers running under the Ubuntu operating system.

**Clonezilla:** A Freeware application for creating and restoring large exact copies or images from and to computers.

**geany:** An enhanced OpenSource editor application widely used in the Ubuntu environment for working with human readable files.

**gHex:** An OpenSource application that allow a user to examine non-human readable in hexadecimal format.

**grep:** One of many OpenSource software tools available scanning and filtering for one or many patterns within a collection of data.

Firefox: One of many web browser applications available to the typical Ubuntu user.

Thunderbird: An email application available typically found in Ubuntu environments.

Arduino: A family of specialized hardware that is used for mechanical control. Control is achieved using the OpenSource Arduino programming language.

Sloeber: A version of the eclipse programming environment that has been 'fine tune' to support Arduino project development. Both eclipse and Sloeber are available under OpenSource licenses.

Legend: Term applied to documents presented to an audience or recipient with the objective of creating a specific impression. Often times creating a legend involves the creation of fictitious, ghost, or heavily biased environments.

## Appendix B

The information provided in this appendix is presented without warranty or any guarantee of suitability of any other purpose than for testing the feasibility of the approach used in the novel to discover information in an automated manner. It worked sufficiently well enough to justify incorporating the approach into the story.

### Section 1: First Key File and grep Shell Script

#### 1.1> 001\_keyfile:

```
001_keyfile:    ver001
                rana      Frank's lastname.
```

#### 1.2> Script File:

```
#!/bin/bash
# dogrep4key.sh
# Loads 001_keyfile for grep search of Thunderbird mail account folders.
# Copyright © 1988-2022 by Abbott Analytical Products. All Rights Reserved.
# 220422 update will in re-write 4
# 20220103 create
#-----
echo "Start grep of folder and sub-folders"
echo "Default output is displayed on screen."
echo "Redirect output using syntax grep [options] > output_filename_date_time_of_run"
# List of files with pattern hits
grep -rl -f /media/tom/Silo_0021/TechWork/NovelWriting/004_support/220203_search4keys/
001_keyfile ~/.thunderbird/pgvwamcw.default/Mail

# List of details ... line of text with the search pattern found
#grep -r -f /media/tom/Silo_0021/TechWork/NovelWriting/004_support/220203_search4keys/
001_keyfile ~/.thunderbird/pgvwamcw.default/Mail
```

### Section 2: Final Key File and grep Shell Script

#### 2.1> 013 keyfile:

```
013_keyfile      (Comments deleted from actual pattern file)
rana             Frank's last name
github          A common public project repository
link2link       An IT job posting site
banks           Stacy's last name
anetswarf       Frank's client domain
zbozz           Email account at anetswarf.com
```

architect	Email account at anetswarf.com
scrummaster	Email account at anetswarf.com
gator	Email account at anetswarf.com
turtle	Email account at anetswarf.com
patel	Email account at anetswarf.com
judge	Email account at anetswarf.com
schema	Term for database organization
sql	Structure query language
keystroke	An electronic representation of a button press on a keyboard
capture	To collect information or data
robot	A tool for incrementally traversing the Internet
crawler	A tool for incrementally traversing the Internet
record	A unique collection of in a database
public	Availability type of record or information
state	A unit of government or a possible condition/status
machine	A behavioral computational model for software decision flow
CAPTCHA	Common challenge mechanism to defeat web robots.
Turing	A test attempting to classify a conversation between computers
ticket	Travel coupon
flyer	Someone who travels by air
rental	Room, vehicle, equipment temporary procurement
meeting	Software engineering project term
agenda	Software engineering project term
agile	A programming methodology
release	An Agile term
sprint	An Agile term
roadmap	Software engineering project term
manifest	Software engineering project term
airline	Software engineering project term
scrum	Software engineering project term
collaboration	Software engineering project term
iterative	Software engineering project term
incremental	Software engineering project term
stakeholders	Software engineering project term
stand-up	Software engineering project term
poker	Software engineering project term
pizza	Software engineering project term
lex-yacc	Too for building state machine
release	Software engineering project term
package	Software engineering project term
configuration	Software engineering project term
mercury	A web performance tool
wireshark	A web performance tool
nutty	A web performance tool
on-line	Virtual location on the web
'eform.com'	Web source of forms
poxy	Software engineering project term
flag	Software engineering project term
enigma	Software engineering project term

virtual	Software engineering project term
cnc	Computer numeric control milling, printing, writing
'build.xml'	A powerful specification file for creating software artifacts
ant	The Apache Ant tool for sequential execution of a specification
spinnaker	Frank's last project
catalina	Frank's last client
CSE	Catalina Software Engineering
birth	An action
citizen	Unique actor
vote	An action
ballot	A documentation
absentee	Condition of not being present
sign	An action
signature	The presentation of an individual's mark
witness	A person who attest to an event
legend	Story supporting registrants documentation
statement	Artifacts used to support registration

## 2.2> Script File:

```
#!/bin/bash
# dogrep4home.sh
# Loads 001_keyfile for grep search of Thunderbird mail account folders.
# Copyright © 1988-2022 by Abbott Analytical Products. All Rights Reserved.
# for long search tom@thincntr:~$ ./dogrep4home.sh >/media/tom/Silo_004/013_key_001_run
# 220422 update will in re-write 4
# 220107 tried in thincntr
# 220103 create
#-----
echo "Start grep of folder and sub-folder"
echo "Default output is displayed on screen."
echo "Redirect output using syntax grep [options] > output_filename_date_time_of_run"
# List of files with pattern hits
# -rl recursive list of files
#grep -rl -f
/media/tom/Silo_0021/TechWork/NovelWriting/004_support/220203_search4keys/013_keyfile --
exclude=\*.msf ~/Local_Folder
# List of details found
# -riw recursive through sub-folders & ignore case & whole words
# -C 2 two lines above and two below
# -f pattern file
#grep -ri -C 2 -f
/media/tom/Silo_0021/TechWork/NovelWriting/004_support/220203_search4keys/013_keyfile --
exclude=\*.msf ~/Local_Folder
### Use to 'jockey' and test parameters
grep -riw -f ./000001_novel/013_keyfile --exclude=\*.msf -r ./*
```

### Section 3: grep Shell Script Scanning syslog Contents

```
#!/bin/bash
# dogrep4syslog.sh
# Searches syslog* (text versions) for 014_keyfile patterns
# Copyright © 1988-2022 by Abbott Analytical Products. All Rights Reserved.
# for long search tom@thincentr:~$ ./dogrep4syslog.sh >
    /media/tom/Silo_004/014_key_001_run
# 220113 adapted from dogrep4home.sh to scan syslog* content
#-----
echo "Start grep of folder and sub-folder"
# List of files with pattern hits
#grep -rl -f
/media/tom/Silo_0021/TechWork/NovelWriting/004_support/220203_search4keys/013_keyfile --
exclude=\*.msf ~/Local_Folder
# List of details found
# adapted from dogrep4home.sh
# do not need *.msf exclude of file need exclude of laptio pattetn from 013
# sudo ./dogrep4syslog.sh > outgrep_220113_2127_Silo
# TBD: need to move /var/log/syslog* and extract to

grep -riw -f ./000001_novel/014_keyfile -r ./000003_novel_syslog_grep/syslog*
```