

Ἀέαιũñöùόç Ἀδιεçêãðôéêπί ἸΎούι ἁέα ×ñÞόç ìà ôī FreeBSD

ἵáo óýíôĩĩò ìäçãüò

Doug White

dwhite@resnet.uoregon.edu

Ἰũñôéìò 1997

Ôī FreeBSD ἁβίáé Ἰía éáôĩ÷ ðñùĩŸĩ ììðĩñéêũ óýìäĩēĩ ôĩô FreeBSD Foundation.
Ἰé ēŸiáéò lomega, Zip, éáé Jaz ἁβίáé ἁβôḁ éáôĩ÷ ðñùĩŸiá ììðĩñéêũ óýìäĩēḁ ἁ ììðĩñéêũ óýìäĩēḁ ôçò
lomega Corporation óðéò ÇíùĩŸiáò Ðĩēéðḁḁò ἁ/ēáé óḁ Ÿēēḁ ÷ ḁñḁò.
Ἰé ēŸiáéò Motif, OSF/1, éáé UNIX ἁβίáé éáôĩ÷ ðñùĩŸiá ììðĩñéêũ óýìäĩēḁ éáé Ἰé ēŸiáéò ἁ ðñũóḁéò IT
DialTone éáé The Open Group ἁβίáé ììðĩñéêũ óýìäĩēḁ ôĩô The Open Group óðéò ÇíùĩŸiáò Ðĩēéðḁḁò
éáé óḁ Ÿēēḁ ÷ ḁñḁò.
ÐĩēēŸò áðũ óéò ēŸiáéò ἁ ðñũóḁéò Ἰé Ἰðĩḁò ÷ ñçóéĩìðĩēĩŸiáé áðũ ôĩô éḁḁḁéḁḁḁḁḁŸò ἁ ôĩô
ðùēçôŸò ôĩô ḁéḁ Ἰḁ ḁéḁēñḁĩĩôĩ óḁ ðñĩũũĩóḁ ôĩô éḁũñĩŸiáé ììðĩñéêũ óýìäĩēḁ. ¼ðĩô áðôŸò
ḁìðḁĩḁḁḁḁé óḁ áðôũ ôĩ éḁḁḁḁḁḁ éáé ḁéḁ Ÿḁḁ áðũ áðôŸò ḁĩũñḁḁé ç Ἰũḁḁ Ἀĩũððôĩçò ôĩô FreeBSD Ÿḁé
ḁβίáé ðéḁḁĩũĩ Ἰḁ ἁβίáé ììðĩñéêũ óýìäĩēḁ, éḁ ḁḁḁḁ Ἰiá áðũ óḁ óýìäĩēḁ: “TM” ἁ “®”.

Ôī ðḁñũĩ Ḃḁḁḁḁḁ ðḁñḁḁḁḁḁḁ ḁḁ Ἰḁ éũḁḁḁ ḁḁ ðĩḁḁḁ (slices), éñĩḁḁḁḁḁḁḁ (partition) éáé
ĩñḁḁḁḁḁḁḁ (format/ḁéḁĩũñöùóç) óēēçñĩŸò ḁḁḁḁḁ éáé ðḁñũĩḁ ἸŸḁḁ ḁḁ ḁññḁḁḁḁḁḁ ḁéḁ ÷ ñÞόç ìà ôī
FreeBSD. Ôḁ ḁḁḁḁḁḁḁḁḁḁ ḁḁḁḁḁḁḁḁ ḁḁḁḁḁḁḁḁ FreeBSD 2.2 ḁḁḁḁ ḁḁḁḁḁḁḁḁ ḁḁḁḁḁḁḁḁ ḁḁḁḁ Ḃḁḁḁ
ḁḁḁḁḁḁḁ. Ôī éḁḁḁḁ Ḃ÷ḁḁ ḁḁḁḁḁḁḁḁ ḁḁḁ ḁçĩ Ḃḁḁḁḁ 4 ôĩô FreeBSD.

1 Ἀéóḁḁḁḁḁ éáé Ἰñéóĩĩḁ

1.1 Ἀḁḁḁḁ

Ôī Ἰḁ ḁñĩóēŸḁḁḁ ḁḁḁḁḁḁ ìḁ ḁðéð÷ḁ ḁḁ Ḃiá ḁðũñ÷ĩ ḁýóðçḁḁ ḁβίáé ÷ ḁñḁḁḁçñéóðéēũ ḁñḁ Ḃḁḁḁḁḁ ḁéḁ ÷ ḁḁḁḁḁḁ
óðóðḁḁḁḁ. Ôī éũḁḁḁ, ôī éñũḁḁḁḁḁḁ éáé ç ḁñĩóēḁç ḁḁḁḁḁ ḁḁḁḁḁḁ éḁḁḁḁḁḁ ḁñĩôĩ÷ḁ éáé òḁḁḁ ḁýĩḁḁḁ ḁĩḁḁḁ.
Ἰḁ ḁḁḁḁḁ ḁḁḁḁ ḁḁḁḁḁ Ἰḁ ḁḁḁḁḁḁḁ Ḃiá ḁḁḁḁḁḁ ḁḁḁḁ ḁḁ ḁḁḁḁḁḁḁḁḁḁ. Ἀðôũ ôī Ḃḁḁḁḁḁ ḁñũóçḁḁ ḁò
ðñĩðũḁḁḁḁ Ἰḁ ḁḁḁḁḁḁḁḁ ç ḁḁḁḁḁḁḁḁ éáé Ἰḁ ḁḁḁḁḁ÷ḁḁḁ ḁð÷ḁ ḁḁḁḁ. Ἀðð÷ḁḁ, ḁḁḁḁḁḁḁ ḁḁḁḁ÷ḁḁḁḁ
ḁñḁḁḁḁḁḁ (ḁḁḁḁḁ ḁḁ sysinstall), óðéò ḁñũóḁḁḁḁ ḁḁḁḁḁḁḁ ḁḁḁḁḁḁḁḁ, Ḃ÷ḁḁ ḁḁḁḁḁḁḁ ḁçĩ ḁḁḁḁḁḁḁḁ.

Ôðũñ÷ĩḁ ḁḁḁḁḁ ḁḁḁḁḁ (modes) ḁḁḁḁḁḁḁḁ:

- *δοιᾶδόρ* *εἰεδοιῶνᾶ* (*compatibility mode*): Ἀεἰνῶνους οἷς ἀβείρς ἰόδα ἰά Ὑ÷ᾶ Ὑἰά δβιάεα οἰβιάοῦι (slice table) εἶε ἰά ἰδῖνᾶ ἰά ÷ηζοέῖιθῖεζᾶ δᾶνῦεεζᾶ ἰδῖ Ὑεεᾶ εἰεδοιῶνᾶεῦ ὀοοδβιάδα.
- *ἀδῖεᾶεοόεε* *εἰεδοιῶνᾶ* (*dedicated mode*), ἰᾶνέῦδ οἷνῦδ εὙᾶᾶοᾶ εἶε *ἀδέεβῖαοἰά ἀδῖεᾶεοόεε* *εἰεδοιῶνᾶ*: Ἀεἰνῶνους ἰνῶδ ἀβείρς ÷ῖνδ δβιάεα partitions. Ἄοδῦ εὔἰᾶε ὀζῖ ἰεᾶᾶεᾶοᾶ ὀζδ δῖνῶεᾶοζδ ἀβείρς ἀοεῖεῦδᾶηζ ἰεῦ Ὑἰά ἰζ-FreeBSD εἰεδοιῶνᾶεῦ ὀῥοζῖᾶ δέεἰνῖ ἰά ἰζ ἰδῖνᾶ ἰά ἰᾶε οἷ ἀβείρς. ζ Ὑεῖνᾶός *ἀδέεβῖαοἰά* ἰᾶῶὙῖᾶᾶε ὀοῖ ἔβῖᾶῶῖ οἷ ὕοε οἷ ὀῥοζῖᾶ ἰδῖνᾶ ἰά ἰζῖ ἰᾶᾶῖνῖνῶᾶ Ὑἰᾶ ἀβείρς ἰῖνῖθῖεζᾶ Ὑῖ ἔᾶῶ’ ἰᾶῶῖ ὀῖ ὀῖνῖ.

[illegible]

ΔΥνά αδῦ ὁçí ἁδέεῖαP ὀνυθῖο εἰσεῖοῖναβᾶο ὀδῦñ÷ῖοí ἁγῖ ἰΥῖεῖεῖ ὀδçῖοβῖαδῖο ὀῖο ἁβῖεῖο. Ἰ ὀñῖοῖð ÷ñçῖοεῖῖῖῖεῖᾶ ὀῖ ἁñᾶεᾶβῖ ἁᾶεᾶὀῤῖὀὀὀὀçῖ ὀῖο ὀὀὀὀPῖαδῖο /stand/sysinstall. Ἀδῦ ὀῖ 2.1.7-RELEASE ἑᾶε ἰᾶὀῤ ç sysinstall ἁδῖῖῖῖεᾶβῖ ὀῖ ὀὀPῖοεῖ ὀῖῖ ἁβῖεῖῖ ἁδᾶεᾶP ἁδῖὀñΥῖᾶε ὁçí ἁδᾶὀεᾶβᾶο ἁεῖᾶᾶP ὀὀῖ label (ὀβῖὀῖð) ἑᾶε ὀὀᾶ ὀῖPῖαὀᾶ (partitions) ὀῖῖ ἁβῖεῖῖ. ἈδῖὀδῖΥῖῖ ὀᾶὀ ἁδῖὀñΥῖᾶε ἰᾶ ἁδῖὀεçᾶγᾶὀᾶ ὀεð ἁεῖᾶᾶΥῖὀ ἰῖῖῖ ὀὀῖῖ ὀὀᾶᾶᾶñῖῖῖΥῖῖ ἁβῖῖ ÷ññῖð ἰᾶ ἁδçñᾶῤᾶε ὀῖὀð ὀδῖῖῖῖὀῖὀð. Ἰ ἁᾶγᾶὀñῖὀ ὀñῖὀῖὀ ἁβῖᾶε ἰᾶ ἁεðᾶεΥῖὀᾶὀ ἁεῤῖὀñᾶὀ ἁῖὀῖῖΥῖὀ ἰᾶ ὀῖ ÷Υñῖ ἁδῖ ὁçí ἁñᾶñP ἁῖὀῖῖῖ ἡð root. Ἀῖ ἁδῖῖΥῖᾶὀᾶ ὁçí ἁῖῖῖῖῖὀὀὀὀῖP εἰσεῖοῖναβᾶ ÷ñᾶεῤᾶὀᾶ ἰᾶ ἁεðᾶεΥῖὀᾶὀ ἰῖῖῖ 2-3 ἁῖὀῖῖΥῖὀ ἁῖP ἰᾶ ὀῖ sysinstall ὀñΥῖᾶε ἁῖὀῖῖΥῖὀᾶὀ ῖῖᾶῤῖῖ ὀñᾶὀῤῖῖ.

1.2 Ĭñéóìïß

Ç áéá÷âßñéóç äßöêùí òôí UNIX® Ý÷áé äþóáé íÝá Ýíííéá óá òðŨñ÷íõóäð ëÝíáéð. Ôí ðánaéŨòù èáíéëüüáérí áîçãâß òçí íñíèíäßá ðíõ ÷ñçóéíððíèíýíá óá áóòù òí èáßíáíí éáé óóí FreeBSD äáíééŨ (ðñíóáíðð).

- [illegible]

1.3 ΟçíᾱḂᾱ ðìò ðñÝðᾱέ íᾱ ðñìóÝíᾱðᾱ ἑᾱέ ðᾱᾱḂᾱð

Ἀþòᾱ íᾱᾱÜèç ðñìóí÷þ òçç ᾱέᾱᾱέᾱᾱᾱ, ᾱí ᾱᾱí èÜᾱᾱðᾱ ðᾱ ἰÝðᾱ ᾱᾱð ἑᾱέ ᾱḂíᾱέ èÜèò ἰðñᾱḂ íᾱ ἑᾱᾱᾱᾱᾱñÝðᾱðᾱ ᾱᾱ ðᾱñᾱ÷÷ìᾱíᾱ Üèèì ᾱḂᾱéì ᾱòò ᾱᾱᾱᾱḂᾱðò.

ðñìóÝíᾱð ᾱé èÜíᾱðᾱ. ἈḂíᾱέ ðñᾱ ᾱýᾱᾱᾱ íᾱ ἑᾱᾱᾱᾱᾱñÝðᾱðᾱ èÜèò ᾱḂᾱéì ᾱòᾱᾱýñíᾱðᾱ ἰᾱ ᾱᾱóÝð ᾱᾱð ᾱíðᾱᾱÝð. Ἀí Ḃ÷ᾱðᾱ ᾱíᾱᾱᾱᾱḂᾱð ᾱéÝᾱíðᾱ ᾱᾱ ἰçíýᾱᾱᾱ ᾱòò ðñᾱḂíᾱ ἑᾱᾱÜ òç ᾱέᾱᾱᾱᾱᾱᾱ ᾱᾱᾱḂíçóçð ᾱᾱᾱ íᾱ ᾱñᾱḂᾱ ᾱç ᾱᾱᾱᾱᾱ ᾱᾱᾱᾱᾱᾱ ᾱḂᾱᾱᾱ.

ÖᾱᾱᾱÜ ᾱᾱí Ḃ÷ᾱᾱ ἑᾱᾱḂᾱ ᾱᾱᾱýç ᾱᾱᾱ ᾱçᾱᾱÝð ðìò ἰðñᾱḂ íᾱ ðñìᾱᾱᾱᾱᾱ. Ç ᾱᾱᾱýç ᾱḂíᾱέ ᾱᾱᾱ ᾱᾱð!

1.4 Zip, Jazz, ἑᾱέ Üèᾱᾱ ᾱᾱᾱᾱñíýᾱᾱᾱ ἰÝᾱᾱ

Ἰᾱ ᾱᾱᾱᾱñíýᾱᾱᾱ ᾱḂᾱᾱᾱ ἰðñíýí íᾱ ᾱᾱᾱññöüèýí ᾱᾱᾱ ἑᾱᾱñᾱᾱᾱᾱ ᾱḂᾱᾱᾱ. Òí ᾱçíᾱíᾱᾱᾱ ᾱḂíᾱέ íᾱ ᾱḂíᾱέ ᾱᾱᾱᾱñÝñð ἰ ᾱçᾱᾱð ᾱòò ᾱḂᾱᾱᾱ ἑᾱᾱÜ ᾱçí ᾱᾱᾱḂíçóç ᾱòò ᾱᾱᾱᾱḂᾱᾱᾱ ἑᾱᾱ ἰᾱ ᾱᾱᾱᾱÝᾱ ἰÝᾱᾱ þᾱᾱᾱ íᾱ ἰðñÝᾱᾱ ἰ ðñᾱḂíᾱð íᾱ ᾱᾱḂ ᾱᾱᾱÜ ᾱçí ᾱᾱᾱᾱᾱḂᾱ ᾱòò ᾱḂᾱᾱᾱ. ÈᾱᾱᾱÜíᾱð ᾱᾱ èÝᾱᾱ ç ᾱíðᾱᾱᾱ dmesg ᾱᾱᾱ íᾱ ᾱᾱḂᾱ ᾱí ç ᾱᾱᾱᾱᾱ ᾱḂíᾱέ ᾱᾱᾱ ἑḂᾱᾱ. Ἀᾱᾱ ᰄᾱñÜᾱᾱᾱᾱ ᾱí ἰ ðñᾱḂíᾱð ᾱñÜᾱᾱᾱ:

Can't get the size

öüðᾱ ᾱᾱí ᾱðÜñ÷ᾱᾱ ᾱᾱᾱᾱÝᾱ ᾱᾱᾱ ᾱçᾱᾱ. Ἀí ᾱḂíᾱέ ᾱᾱᾱ ἑᾱ ðñÝðᾱᾱ íᾱ ᾱðᾱᾱᾱᾱᾱᾱᾱᾱ ᾱí ἰç÷Üíçíᾱ ðñᾱᾱ ᾱᾱᾱÜᾱᾱᾱ íᾱ ᾱᾱᾱññöüèýᾱ ᾱçí ᾱᾱᾱᾱÝᾱ.

2 Ἀᾱᾱññöþñíᾱᾱᾱ ᾱḂᾱᾱᾱð ᾱᾱᾱ ᾱðìᾱᾱᾱᾱᾱᾱᾱᾱ ἑᾱᾱᾱᾱᾱᾱᾱᾱ

2.1 Ἀᾱᾱᾱᾱᾱᾱᾱ

Ἀᾱᾱᾱ ç ðᾱñÜᾱñᾱᾱᾱ ðᾱñᾱᾱñÜᾱᾱᾱ ᰄþò íᾱ ᾱᾱᾱÜíᾱðᾱ ᾱḂᾱᾱᾱ ἰᾱñí ᾱᾱᾱ ᾱí FreeBSD. ÈðìççᾱḂᾱ ḱᾱᾱᾱ ἰᾱ ᾱḂᾱᾱᾱ ᾱðìᾱᾱᾱᾱᾱᾱᾱ ἑᾱᾱᾱᾱᾱᾱᾱ ᾱᾱí ἰðñíýí íᾱ ᾱᾱᾱᾱᾱᾱᾱᾱ ᾱðᾱ Üèᾱᾱ ἑᾱᾱᾱᾱᾱᾱᾱÜ, ἰýðᾱ íᾱ èÜñíᾱᾱ boot.

2.2 Þðò íᾱ ᾱᾱᾱÜíᾱðᾱ ᾱḂᾱᾱᾱð ᾱðìᾱᾱᾱᾱᾱᾱᾱᾱ ἑᾱᾱᾱᾱᾱᾱᾱᾱ ἰᾱ ᾱí Sysinstall

To /stand/sysinstall, òí ðñᾱᾱñᾱᾱᾱ ᾱᾱᾱᾱÜᾱᾱᾱᾱ ᾱòò ᾱᾱᾱᾱᾱᾱᾱᾱ, Ḃ÷ᾱᾱ ᾱðᾱᾱᾱᾱᾱ ᾱᾱᾱ ᾱᾱᾱᾱᾱᾱᾱ ᾱòò ᾱᾱᾱᾱᾱᾱ þᾱᾱᾱ íᾱ ᾱðᾱᾱᾱᾱᾱ ᾱçí ᾱᾱᾱᾱᾱᾱᾱ ᾱñᾱᾱᾱᾱ ᾱᾱ ᾱḂᾱᾱᾱ ἑᾱᾱ íᾱ ᾱðᾱᾱᾱᾱ ἑᾱᾱᾱᾱᾱ ðñìᾱðÜᾱᾱᾱ. Òᾱ ðñᾱñÜᾱᾱᾱᾱ fdisk ἑᾱᾱ disklabel ðìò ᾱðÜñ÷ᾱᾱ ᾱᾱᾱ ᾱᾱᾱ sysinstall ᾱḂíᾱέ ᾱñᾱᾱᾱᾱᾱ ðᾱñᾱᾱÜᾱᾱᾱᾱ (GUI - Graphical User Interface) ἑᾱᾱ ἰᾱᾱᾱᾱᾱ ᾱí ἰðÝñᾱᾱᾱ ᾱòò èᾱḂᾱᾱᾱ ᾱᾱᾱ ᾱḂᾱᾱᾱ. ἈḂíᾱᾱ ðñìᾱᾱᾱᾱ ἰ ᾱᾱᾱᾱᾱᾱᾱᾱ ᾱñᾱᾱᾱ íᾱ èᾱᾱᾱᾱ ᾱḂᾱᾱᾱ ᾱðᾱ ᾱçí Ḃᾱᾱᾱç 2.1.7 ἑᾱᾱ ἰᾱðÜ ᾱòò FreeBSD.

1. Ἰᾱᾱᾱᾱᾱᾱ ᾱí sysinstall þð root ᾱñÜᾱᾱᾱᾱᾱ

```
# /stand/sysinstall
```

ᾱᾱᾱ ᾱñᾱᾱᾱ ᾱíðᾱᾱᾱ.

2. ἈðᾱᾱÝíðᾱ Index.
3. ἈðᾱᾱÝíðᾱ Partition.
4. ἈðᾱᾱÝíðᾱ ᾱí ᾱḂᾱᾱᾱ ᰄðò èÝᾱᾱᾱ íᾱ ᾱᾱᾱᾱᾱᾱᾱᾱᾱ ᾱñçᾱᾱᾱᾱᾱᾱᾱ ᾱᾱ ᾱᾱᾱÜᾱᾱ ἑᾱᾱ ἰᾱðÜ **SPACE**.

5. Ἀί εά ÷ ñçóéíðìéþóáðå ùèí òí ἁßóèí ἁέά òí FreeBSD, ἁðéëÝíðå Ἀ.
6. Ἰùèéð óáð ñòðþóáé áí ùíòò èÝéåðå íá òí èÝíáðå áððü (Do you still want to do this) ἁðáíðþóðå Yes.
7. ἈðéëÝíðå Write.
8. Ἐά óáð ἁḗÛéåé íéá ðñíḗæíðìþçóç ó÷ḗðéèÛ íå òçí ἁḗñḗðþ óå ððÛñ÷ííóá óðóðþíáðå ἁðáíðþóðå Yes.
9. Ἰùèéð óáð ñòðþóáé áí èÝéåðå íá ἁḗæáðóðþóáðå Ýíá boot loader, ἁðéëÝíðå None ἁέά íá ἁðñóýḗðå ðñéḗḗþðìå ἁèèḗḗþ òðí Master Boot Record. Ç ἁḗæáðÛóðáóç ḗñüð boot loader ÷ñḗÛæḗðåé ùñí óå éḗéñýñéð ἁḗæáðóðÛóáéð òí FreeBSD þ áí ó÷ḗæÛæḗðå íá òðñéḗðþóáðå òí ἁßóèí óå èÛðìéí Ûèèí íç÷Ûíçíá.
10. Ðáðþóðå **ENTER** òðí ḗçíḗññòéèü ðñíḗ ḗñ ḗÝḗ “Wrote FDISK partition information out successfully”.
11. ἈðéëÝíðå Quit ἁέά íá ἁḗḗßðå ḗðü òí FDISK Editor éḗé ððÛ **ESCAPE** ἁέά íá ἁðéóðñÝðåðå òðí Index menu.
12. ἈðéëÝíðå Label ḗðü òí Index menu.
13. ἸñÛóðå òí ἁßóèí óáð ùðüð èÝéåðå (ḗþ ðñḗæḗðå óå partitions). Ἀí èÝéåðå ùñí Ýíá partition ðáðþóðå òí c ἁέά íá ḗçíèðñḗðåðå òí partition. ἸðÛ ἁðèð ἁḗ÷èḗðå ðéð ðñíḗðéèḗÝð ἁέά óå ðñíḗæíñéóíÝíá size, partition type Filesystem, éḗé mountpoint (òí ððñí ḗḗ ÷ñçóéíðìéḗðåé).
14. Ðáðþóðå w ùèéð ðḗæèèþóáðå éḗé ἁðéèðñþóðå ðéð ḗèḗḗÝð ἁέά íá óñíḗ÷ßóðå. Òí filesystem èḗ ðḗñḗóðḗ ḗðüðḗðå ḗðü òçí ḗñèèþ newfs ḗèüð áí ἁðéëÝíðå òí ḗñðèḗðí. (Ἀí ḗÛæḗðå éḗéñýñḗéí partition óáð óðñÝñḗé íá òí èÝíáðå!). Ἐά óáð ḗþóḗé òí èÛèð:

```
Error mounting /mnt/dev/ad2s1e on /mnt/blah : No such file or directory
```

Ἀḗñþóðå òí.

15. Ðáðþóðå óñíḗ÷ḗḗḗ òí **ESCAPE** ἁέά íá ἁḗḗßðå.

2.3 Ðüð íá ððéÛíðå ἁßóèíðð ἁðñéḗæéóðéèþð èḗéðñḗḗḗðò ðÝóá ḗðü òçí ḗñḗñþ ḗñèèþí

ἈèðḗÝóðå ðéð ðḗñḗèÛð øñèèèÝð ḗñèèèèèèèèèèèè òí ad2 íå òí ùñíá òçð óðóèḗðð òí ἁßóèí (ḗñÛððå dmesg íá ḗèÝḗḗðå áí ḗḗḗé òüóðü).

```
# dd if=/dev/zero of=/dev/ad2 count=2
# disklabel /dev/ad2 | disklabel -B -R -r ad2 /dev/stdin
ἘÝèðñ ùñí Ýíá partition, ðððå ððñýñá íá ÷ñçóéíðìéþóíðå òí èñÛðé 'c':
# newfs /dev/ad2c
```

Ἀí ÷ñḗÛæḗðå íá ḗèÛíðå òí disklabel ἁέά íá ÷ñçóéíðìéþóðå ðñéḗḗðè partitions (ἁέá ðḗñÛḗḗḗḗ áí èÝéåðå swap) ðüðå èÛíðå:

```
# dd if=/dev/zero of=/dev/ad2 count=2
# disklabel /dev/ad2 > /tmp/label
Ἀñþðå òí disklabel ἁέά íá ðñíðéÝóððå partitions:
# vi /tmp/label
# disklabel -B -R -r ad2 /tmp/label
ḗèðḗÝóðå òçí ḗñèèþ newfs óðå partitions ùðüð ðñÝðḗé
```

Ἰ ἁßóèí óáð ḗḗḗé Ýðñèñð ðñð ÷ñþç.

3 Ἀεάιιñöþííîáò ἁßóêîðð ἁέἁ óîîἁἁð Ëἁéôîñḡḡḡḡ

3.1 Ἀέóἁḡḡḡḡ

Ç ἁḡḡḡḡ ἁíðíêþí ἁßἁέ ἰḗ ἰ ἁðéíüðḡḡḡ ðñüððò ἁέἁ ἰḗ ððéÛíḡḡḡ ἁßóêîðð ἁðíêéἁéóðéêþð ḡἁéðîñḡḡḡ ἁééÛ ἁßἁέ ḡἁé ἰ ἁððéíüðḡḡḡ ἁέἁ ἰḗ ððéÛíḡḡḡ óîîἁἁðíýð ἁßóêîðð. Õí fdisk ἁðü ðçí ἁḡḡḡḡ ἁíðíêþí èÝéἁ ḡḡḡéóóüðḡḡḡ ἁíþḡἁéð ἰḗçíἁðéêþí ḡἁé ḡíêéÝð ἁíþḡἁéð ó÷ḡðééÛ ἰḗ ðí ḡßἁéἁ êñḡἁðéþí, èÛðé ḡíð ḡñíḡἁíþð ἁḗ ḡḡḡḡḡḡḡḡ ἰḗ ἰÛéἁðḡ. Ἀé ἁððü ÷ñçóéíðíéþðḡḡ ðí sysinstall ἁέἁ ἰḗ ððéÛíḡḡḡ óîîἁἁðíýð ἁßóêîðð ἁéíêîðêþíðḡḡ ðéð ἰḗçḡḡḡ ḡḡḡḡḡḡ.

3.2 Ððð ἰḗ ððéÛíḡḡḡ ἁßóêîðð óîîἁἁððð ḡἁéôîñḡḡḡḡ ἰḗ ðí Sysinstall

1. ἰḗéíþðḡḡ ðí sysinstall þð root ḡḡÛííḡḡḡ

```
# /stand/sysinstall
```

óðçí ḡḡḡḡḡ ἁíðíêþí.

2. ἈðééÝíðḡ Index.
3. ἈðééÝíðḡ Partition.
4. ἈðééÝíðḡ ðí ἁßóêîðð èÝéḡḡḡ ἰḗ ἁḡéἁðḡóðþðḡḡḡ ÷ñçóéíðíéþðḡḡ ḡḡ ἁḡḡḡḡḡ ḡἁé ἰḗðÛ **SPACE**.
5. Ἀí ḡḡ ÷ñçóéíðíéþðḡḡ üêí ðí ἁßóêîð ἁέἁ ðí FreeBSD, ἁðééÝíðḡ A.
6. ¼ḡḡḡ ḡḡð æçðçèḡḡ:

Do you want to do this with a true partition entry so as to remain
cooperative with any future possible operating systems on the
drive(s) ?

(ÈÝéḡḡḡ ἰḗ ðí èÛíḡḡḡ ἁððü ἰḗ ḡḡḡḡḡḡḡḡ èñḡÛðéἁ ἁέἁ ἰḗ ḡḡḡḡḡḡḡ ḡîîἁἁðü ἰḗ Ûééἁ ḡἁéðîñḡḡḡḡ
óðððḡḡḡḡ?) Ἀðḡḡþðḡḡ Yes.

7. ἈðééÝíðḡ Write.
8. ¼ḡḡḡ ḡḡð æçðçèḡḡ ἰḗ ἁḡéἁðḡóðþðḡḡḡ ðí boot manager, ἁðééÝíðḡ None ἰḗ ðí **SPACE** ḡἁé ἰḗðÛ **ENTER** ἁέἁ OK.
9. Quit (ḡḡḡḡḡḡ) ἁðü ðí FDISK Editor.
10. Èἁ ḡḡð ñüðþḡἁ èÛðé ó÷ḡðééü ἰḗ ðí boot manager ḡÛéé, ἁðééÝíðḡ None ἰḗḡḡ.
11. ἈðééÝíðḡ Label ἁðí ðí Index menu.
12. ἰñḡÛðḡḡ ðí ἁßóêîð üððð èÝéḡḡḡ (ḡḡþ ḡḡ ἰñḡḡḡḡ ḡḡ partitions). Ἀí èÝéḡḡḡ ἰüñ ḡḡḡ partition ἁðêþð ḡḡ÷ḡḡḡḡ ḡéð ḡñḡḡðééḡḡḡ ἁέἁ ḡḡ ḡñḡḡḡḡḡḡḡḡḡ ḡḡḡ size, partition type filesystem, ḡἁé mountpoint (ðí ἰðíßí ḡḡḡ ÷ñçóéíðíéḡḡḡḡ).
13. Õí filesystem ḡḡ ḡḡḡḡḡḡḡ ἁððüḡḡḡ ἁðü ðçí ἁíðíêþí newfs ḡéðüð ἁí ἁðééÝíðḡḡ ðí ἁíðêḡḡḡ. Ἀí ḡÛḡḡḡḡ ḡἁéñýḡḡḡḡ partition ḡḡð óðîÝḡḡḡ ἰḗ ðí èÛíḡḡḡ! Èἁ ḡḡð ἁþḡἁé ðí èÛèðð:

```
Error mounting /mnt/dev/ad2s1e on /mnt/blah : No such file or directory
```

Ἀḡḡþðḡḡ ðí.

14. ḡḡþðḡḡ ḡðíḡ÷üḡḡḡ ðí **ESCAPE** ἁέἁ ἰḗ ḡḡḡḡḡḡ.

Ἰ ᾱβóêῖð óᾱð ᾱβῖᾱέ Ὶóῖêῖð ðñῖð ÷ñῑóç.

4 Ἥέᾱò èᾱéòῖñᾱḂᾱò ἰᾱ òῖð ᾱβóêῖð

4.1 ḂñῖóèῚóῖῖðᾱò swap.

Ἐᾱêῑ Ὶῖ ᾱóóçῖᾱ ᾱðᾱêðᾱβῖᾱðᾱέ, ç ᾱῖῚᾱê ᾱέᾱ ἰᾱᾱᾱῖóᾱñῖ swap ᾱβῖᾱðᾱέ ῖêῖ ᾱᾱέ ðéῖ ᾱðéóᾱéðéêῑ. Ḃᾱñῖêῖ ðῖð òῖ ἰᾱ ḂñῖóðᾱêᾱḂ swap óᾱ Ὶῖᾱῖ ððῚñ ÷ῖῖðᾱ ᾱβóêῖ ᾱβῖᾱέ ðññᾱñῚ ᾱῖóêῖῖ, Ὶῖᾱð ᾱᾱῖῖῖñᾱéῖð ᾱβóêῖð ἰðῖñᾱḂ ἰᾱ ῖñòῖðῖéçᾱḂ Ὶóóé ῑóðᾱ ἰᾱ ðᾱñéῚ ÷ᾱέ òῖ ᾱðéðêῖῖ swap ðῖð óᾱð èᾱḂðᾱέ.

Ἄέᾱ ἰᾱ ḂñῖóèῚóᾱðᾱ swap ᾱᾱêῑ ᾱῚᾱðᾱ Ὶῖ ᾱβóêῖ òῖῖ ᾱóóçῖᾱ:

1. Ἐᾱêῑ èῖᾱᾱðᾱ òῖ ᾱβóêῖ (partitioning) ᾱéêῚῖðᾱ òῖ disklabel ᾱᾱ ῖñḂóðᾱ ÷ῑñῖ ᾱέᾱ swap òῖ èñῖῚóé (partition) ‘b’ ᾱᾱ ᾱῚᾱðᾱ òῖῖ ððῖῖéðῖ ÷ῑñῖ óᾱ èῚḂῖῖ Ὶᾱῖ èñῖῚóé, Ḃ.÷. òῖ ‘a’ ῑ òῖ ‘e’. Ὀῖ ἰῚᾱᾱèῖð ðῖð ᾱβῖᾱðᾱ ᾱβῖᾱέ óᾱ blocks òῖῖ 512 bytes.
2. Ὶóᾱῖ èῚῖðᾱ newfs òῖῖ ᾱβóêῖ, Ἰçῖ òῖ èῚῖðᾱ òῖ èñῖῚóé ‘c’. ἈῖðḂᾱðᾱ, èῚῖðᾱ òῖ ῖῖῖ òῖ èñῖῚóé ðῖð ᾱᾱ ᾱβῖᾱέ swap.
3. ḂñῖóèῚóðᾱ òῖῖ /etc/fstab òῖ ðᾱñᾱèῚòῖ:

```
/dev/ad0b          none          swap      sw 0 0
```

ἈéêῚῖðᾱ òῖ /dev/ad0b òῖῖ ῖñῖᾱ òçð ᾱᾱῖῖῖñᾱéᾱð óᾱð òðóéᾱðḂð.

4. Ἄέᾱ ἰᾱ ᾱῖᾱñᾱῖðῖéῑῑðᾱðᾱ Ὶῖᾱðᾱ òῖ ῖῚῖ swap ÷ñçóèῖῖðῖéῑῑðᾱðᾱ òçῖ ᾱῖðῖῑῑ swapon

```
# swapon /dev/da0b
swapon:  added /dev/da0b as swap space
```

4.2 ἈῖóéᾱñῚῖῖðᾱò ᾱᾱ ðᾱñéᾱ ÷ῖῖᾱῖᾱ ᾱβóêῖῖ

Ἀðῖ òῖῖ: Renaud Waldura (<renaud@softway.com>)

Ἄέᾱ ἰᾱ ἰᾱðᾱééῖῑῑðᾱðᾱ ᾱñ ÷ᾱḂ ᾱðῖ òῖῖ ᾱñ ÷éêῖ óᾱð ᾱβóêῖ óᾱ Ὶῖᾱῖ ᾱᾱῖῖῖñᾱéῖ, èῚῖðᾱ:

```
# mount /dev/ad2 /mnt
# pax -r -w -p e /usr/home /mnt
# umount /mnt
# rm -rf /usr/home/*
# mount /dev/ad2 /usr/home
```

4.3 ÖœéÜîôå åíùìÝíîò ãßóëîò àå ôî CCD

Áđĩ ôĩĩ: Stan Brown (<stanb@awod.com>)

[illegible]

Ā́éá íá ôñŸíâôâ CCD đēÝíí ááí ÷ñâĀæáoôâ áéáéü đõñPíá. ĩâ ôçí áíôĭēP ccdconfig, ôĩñôPíâôáé ôĩ éáôŪēēçĩ
KLD áóôũíâôá áí ĩ đõñPíâô ááí Ý÷áé Păc ôđĩóôPñéíç á́éá CCD.

Ôá CCD ôöëÜ÷îíôáé óá partitions ôýôïö 4.2BSD. Áí èÝëäôá íá ÷ñçóëüðîëëóáôá üëí ôüí äëöëí êáé ðÜëé ðñÝðáé íá ôöëÜíäôá Ýíá íÝí partition. Äéá ðáñÜüäéäíá, ç áíôíëð **disklabel -e** ðññáíá íá ääëíäé:

```
#          size      offset      fstype    [fsize bsize bps/cpg]
c: 60074784         0      unused          0         0         0 # (Cyl.  0 - 59597)
```

Ääi ïðññâöâ íá ÷ ñçöèïðññâöâ öi partition c äéá CCD, äöüóñí äñíáé öýðïö *unused*. Áíöèââöâ äçíéíöññâöâ Ýíá íÝí partition äéñéâðö ßäéíö íââÝèíöð áééÜ öýðïö 4.2BSD:

```
#          size      offset      fstype    [fsize bsize bps/cpg]
c: 60074784         0      unused         0         0         0 # (Cyl.    0 - 59597)
e: 60074784         0      4.2BSD         0         0         0 # (Cyl.    0 - 59597)
```

[illegible]

```
# cd /dev ; sh MAKEDEV ccd0

# disklabel -r -w da0 auto
# disklabel -r -w da1 auto
# disklabel -r -w da2 auto

# disklabel -e da0
ᏏᏏᏏᏏᏏᏏᏏᏏ ᏏᏏᏏᏏᏏ ᣎ ᏏᏏᏏᏏᏏ 4.2BSD
# disklabel -e da1
ᏏᏏᏏᏏᏏᏏᏏᏏ ᏏᏏᏏᏏᏏ ᣎ ᏏᏏᏏᏏᏏ 4.2BSD
# disklabel -e da2
ᏏᏏᏏᏏᏏᏏᏏᏏ ᏏᏏᏏᏏᏏ ᣎ ᏏᏏᏏᏏᏏ 4.2BSD

# ccdconfig ccd0 273 0 /dev/da0e /dev/da1e /dev/da2e

# newfs /dev/ccd0c
```

Ç ôêĤ 273 âßíáé ôĭ ĩŸääèò ôĭô stripe. Åßíáé ĩ áñéèiùò ôuĭ sectors (512 bytes ĩ êâéŸíáo) óá êÛèâ block äääñŸíuĭ ôĭô CCD. Èá ðñŸðâé íá âßíáé ôĭôÛ÷éóóĭ 128 kB, êâé äâĭ ðñŸðâé íá âßíáé äŸíâĭç ôĭô 2.

Ôpñá ìðĩñáßôâ íá êÛíáôâ mount êáé íá ÷ñcôéiĩðĩéPóáôâ ôi CCD óáo ìÝóù ôcò óóóéãPò /dev/ccd0c.

já déu aóíáôu éáé ãóÝééêôí áíáééáôéêú ôíô CCD áíáé ôí Vinum. Ðãñéóóúôãñãò ðëçñíöíñßãò óóí Vinum Project
 home page (<http://www.vinumvm.org/>).

5 Ἀð÷ᾗñéóôþᾗ

Ἰ óðᾗᾗᾗᾗÝᾗ òᾗ þᾗᾗᾗ ἰᾗ ᾗð÷ᾗñéóôþᾗᾗ òíðð ðᾗᾗᾗᾗᾗᾗ ᾗᾗ ᾗçí óóíᾗᾗóöíñᾗ ᾗíðð óᾗ ᾗððþ ᾗçí ᾗñᾗᾗóþᾗ ᾗíðð:

- Darryl Okahata (<darrylo@hpnmhjw.sr.hp.com>) ᾗᾗ ᾗᾗð ᾗðᾗÝð ἰᾗçᾗþᾗð ᾗᾗᾗᾗᾗᾗᾗᾗᾗᾗ ᾗíùð ᾗþᾗᾗᾗ ᾗᾗ ᾗðíᾗᾗᾗᾗᾗᾗ ᾗñùðí ᾗᾗᾗᾗᾗᾗᾗᾗᾗᾗ, ᾗᾗ ἰðíþᾗð ᾗ÷ù ðíᾗᾗÝð ᾗíñÝð ÷ñçóᾗñðíᾗþᾗᾗ ᾗçí FreeBSD-questions.
- Jordan K. Hubbard <jkh@FreeBSD.org> ðíð ᾗᾗᾗᾗ ᾗí sysinstall ÷ñþᾗᾗᾗ ᾗᾗ ᾗÝᾗᾗᾗᾗ ᾗþᾗᾗð ᾗᾗᾗᾗᾗᾗᾗ.
- John Fieber (<jfieber@indiana.edu>) ðíð ᾗᾗᾗᾗ ᾗᾗð ðᾗçñíᾗᾗᾗᾗᾗᾗ ᾗᾗ ᾗᾗ ᰇᾗᾗᾗᾗᾗᾗᾗᾗ ᾗᾗ ᾗí DocBook DTD ðᾗᾗ ᾗᾗ ἰðíþᾗ ᾗððᾗ ᾗí ᾗᾗᾗᾗᾗ ᾗᾗᾗᾗᾗᾗᾗ.
- Greg Lehey <grog@FreeBSD.org> ðíð ᾗᾗᾗᾗ ᾗçí ᾗᾗᾗᾗᾗᾗ ἰᾗð, øᾗ÷ñíᾗᾗ ᾗᾗ ᾗᾗᾗᾗᾗᾗᾗᾗ, ᾗᾗ ᾗᾗ ᾗçí ᾗðíᾗðþñᾗᾗ ᾗíð ᾗᾗ ᾗᾗᾗᾗᾗ ᾗÝᾗᾗᾗ.