



- **οἰαάοP εἰεοἰοῖαβᾶ (compatibility mode):** Ἀεάλυνθούος οἰο ἁβόεἰο πῶα ιά Y ÷ ἀε Yἱά ὀβἱάεᾶ οἰΠἱάοῖι (slice table) εἰε ιά ἰδἱῖαβ ιά ÷ nçοεἰἰδιεεᾶβ ὀάνῤεεεᾶ ἁδῦ ῤεᾶ εἰεοἰοῖαεῤ ὀοόοΠἱάοᾶ.
- **ἀδιεεᾶόόεεP εἰεοἰοῖαβᾶ (dedicated mode),** ἰᾶεῖYδ οἰῖYδ εYᾶᾶόᾶε εἰε ἀδεῖβἱᾶοἱᾶ ἀδιεεᾶόόεεP εἰεοἰοῖαβᾶ: Ἀεάλυνθούος ἁῖο ἁβόεἰο ÷ ἡῖῖ ὀβἱάεᾶ partitions. Ἀδῦ εῤἱᾶε ὀῖ ἁεᾶεᾶόᾶ ὀδ ὀῖοεᾶοδ ἁβόεἰο ἁεἰεῖοᾶῖ ἁεῤ Yἱᾶ ιç-FreeBSD εἰεοἰοῖαεῖ οYόόῖᾶ ὀεᾶἱῖι ιά ιç ἰδἱῖαβ ιά ἁε οἱ ἁβόεἰ. Ç Yεοῖᾶόç ἀδεῖβἱᾶοἱᾶ ἱᾶᾶYῖᾶᾶε ὀοἱ εἰᾶᾶοἱ οἰο ῖοε οἱ οYόόῖᾶ ἰδἱῖαβ ιά ιç ἱᾶᾶῖῖῖῖῖῖ Yἱᾶἱ ἁβόεἰ ἱῖῖῖῖῖῖYἱἱ εᾶδ\* ἁοοῖι οἱ ὀῖῖῖ.

Ὀδεό ὀᾶεοοῖοᾶᾶ ὀᾶεὀὀὀὀᾶεό ç ἀδιεεᾶόόεεP εἰεοἰοῖαβᾶ ἁβἱᾶε ι ἁεἰεῖοᾶῖῖ ὀῖῖῖῖῖ ιά ὀδεᾶβ εἰε ιά ÷ nçοεἰἰδιεεᾶβ ὀᾶ ὀὀῤ ÷ ἱᾶᾶ ὀοόοΠἱάοᾶ, ἁοῖῖἱ Yἱᾶὀ εᾶεἱῖῖῖῖῖ ἁβόεἰο ὀἱPεῖὀ ὀῖῖῖῖῖῖῖῖῖῖῖῖῖ ἱῖἱ ἁεᾶ οἱ FreeBSD. ὀᾶῖῖῖ ὀἱ ç οἰᾶᾶP εἰεοἰοῖαβᾶ ἁεᾶόᾶεᾶεᾶε ιYᾶεόç ἁεᾶεᾶοἰοῖᾶεῖῖῖῖῖῖῖῖῖῖῖῖῖ (interoperability) ιᾶ ἰᾶεἰἱὀεῖYδ ἁᾶεᾶᾶᾶὀὀᾶεὀ, ἁβἱᾶε ὀεἱ ὀεYὀεἰεç.

ὀYῖᾶ ἁδῦ ὀῖ ἁδεῖᾶP ὀῖῖῖῖῖ εἰεοἰοῖαβᾶὀ ὀὀῤ ÷ ἱὀἱ ἁYἱ ιYῖᾶἱε ὀδçὀβἱᾶὀὀ ὀἱὀ ἁβόεἰὀ. ἱ ὀῖῖὀὀ ÷ nçοεἰἰδιεᾶβ οἱ ἁῖᾶεᾶἱἱ ἁᾶεᾶὀὀᾶὀὀ ὀἱὀ ὀοόοΠἱᾶὀὀ /stand/sysinstall. Ἀδῦ οἱ 2.1.7-RELEASE εἰε ἰᾶὀ ὀ sysinstall ἁεἰῖῖῖῖ οἱ ὀὀὀεἱἱ οἱ ἁβόεἱ ἁὀᾶεᾶP ἁδεὀῖYὀᾶε ὀῖ ἁὀᾶεᾶᾶ ἁεᾶᾶP ὀἱ label (ὀβόεἰὀ) εἰε ὀᾶ οἰΠἱᾶὀᾶ (partitions) οἱ ἁβόεἱ. ἈδεὀYἱἱ ὀᾶ ἁδεὀῖYὀᾶε ιᾶ ἀδιεεᾶYὀᾶὀ ὀεό ἁεᾶᾶYδ ἱῖἱ ὀἱἱ ὀᾶεᾶεἱYἱἱ ἁβόεἰ ÷ ἡῖῖ ιᾶ ἁὀçῖᾶῤᾶε ὀἱὀ ὀὀῖῖὀὀὀ. ἱ ἁYὀᾶῖὀ ὀῖῖῖῖ ἁβἱᾶε ιᾶ ἁεὀᾶεYὀᾶὀ ἁεῤῖῖᾶὀ ἁἱὀεYδ ιᾶ οἱ ÷ Yῖᾶ ἁὀἱ ὀῖ ἁᾶἱῖP ἁἱὀεἱἱ ῖὀ root. Ἀἱ ἁδεῖYἱᾶὀ ὀῖ ἁδιεεᾶόόεεP εἰεοἰοῖαβᾶ ÷ ῖᾶεῤᾶὀ ιᾶ ἁεὀᾶεYὀᾶὀ ἱῖἱ 2-3 ἁἱὀεYδ ἁἱP ιᾶ οἱ sysinstall ὀῖYὀᾶε ἁἱεYὀᾶὀ εᾶῤᾶε ὀᾶᾶὀῤῖῖ.

## 1.2 ἱῖεοἱῖ

Ç ἁεᾶ ÷ ἁḡῖεç ἁβόεἱἱ ὀἱ UNIX® Y ÷ ἀε ἁὀᾶε ιYᾶ Yἱἱἱᾶ ὀᾶ ὀὀῤ ÷ ἱὀὀᾶ ἁYἱᾶεὀ. Ὀἱ ὀᾶᾶεῤὀ ἁἱἱεῖῖᾶεἱ ἁἱçᾶᾶ ὀῖ ἱῖῖᾶᾶ ὀἱ ÷ nçοεἰἰδιεἱYἱᾶ ὀᾶ ἁὀὀ οἱ εᾶḡἱἱἱ εἰε ὀἱ FreeBSD ἁἱἱῖῖῖ (ὀῖῖὀᾶἱὀ).

- **οἰᾶᾶP εἰεοἰοῖαβᾶ (compatibility mode):** ç ἁεάλυνθούος οἰο ἁβόεἰο πῶα ιά Y ÷ ἀε Yἱᾶ ὀβἱᾶεᾶ οἰΠἱᾶοῖι (slice table) εἰε ιά ἰδἱῖαβ ιά ÷ nçοεἰἰδιεεᾶβ ὀάνῤεεεᾶ ιᾶ ῤεᾶ εἰεοἰοῖᾶεῤ ὀοόοΠἱᾶὀᾶ. Ἀἱὀᾶὀἱ ὀδ ἁδιεεᾶόόεεP εἰεοἰοῖαβᾶ.
- **(ἁδεῖβἱᾶοἱᾶ) ἀδιεεᾶόόεεP εἰεοἰοῖαβᾶ:** ç ἁεάλυνθούος οἰο ἁβόεἰο εᾶὀῤ ὀYὀεἱἱ ὀῖῖῖῖ πῶα ιά ιç ὀᾶεY ÷ ἀε ὀβἱᾶεᾶ ὀἱῖῖῖῖῖῖῖῖῖῖῖῖῖ (slice table). Ἀβἱᾶε ὀεἱ ἁYῖῖç ἁεᾶεᾶᾶὀᾶ ἁεῤ ι ἁβόεἰὀ ἰδἱῖαβ ιά ιç ἁἱὀᾶYᾶε ὀᾶ ιç-FreeBSD εἰεοἰοῖᾶεῤ ὀοόοΠἱᾶὀᾶ. Ἀἱὀᾶὀἱ ὀδ ὀἰᾶᾶP εἰεοἰοῖαβᾶ.
- **ἁβόεἰὀ:** ἱε ὀεεçῖῖῖ ἁβόεἱῖ, ὀᾶ CDROM, ἱε ἰᾶἱçὀἱ-ἱὀὀεYδ ὀοὀᾶὀYδ εἰε ὀᾶ ἁὀᾶεἱYἱᾶ ιYὀᾶ Zip®/Jaz® ἁβἱᾶε ἰᾶεῖYδ ἁδῦ ὀεό ὀοὀᾶὀYδ ἰᾶεῖὀ ἁδιεPᾶὀὀὀ ἁᾶἱῖYἱἱ ὀἱ ÷ nçοεἰἰδιεἱYἱᾶε ὀἱᾶᾶ. Ç ἁᾶὀὀ ἁἱ ÷ P εἰεοἰοῖᾶὀ ἁὀἱP οἱ ιYὀἱ ἁδιεPᾶὀὀὀ Yἱᾶὀ P ὀᾶεὀὀὀᾶῖ ἁβόεἱῖ ἱε ἱὀἱἱῖ ὀᾶεὀὀYὀἱὀᾶε ἁδῦ Yἱᾶ ἱὀYῖ, ἁἱP ἱεᾶ εᾶὀᾶP εἱἱᾶὀᾶε ὀᾶ Yἱᾶ ἱῖῖὀὀὀ ὀῤῖῖ ὀὀçἱ ἁεὀḡἱ ὀἱ ἁβόεἰὀ εἰε ἁεᾶᾶῤᾶε ἁδῦ οἱ ἁβόεἰ P ἁῖῖὀᾶε ἁᾶἱῖYἱᾶ ὀᾶ ἁοοῖἱ. Ὀἱ ἁῖῖὀἱ ἁβἱᾶὀᾶε ιᾶ ἰᾶὀᾶἱP εῤὀἱῖὀ ὀοὀεἱY ÷ ἁᾶὀὀçῖὀὀεἱY ὀἱὀ ἁβόεἰὀ (ἰᾶἱçὀὀὀP ῖἱP, ἱᾶἱεᾶὀὀεῖῖῖῖῖῖῖῖῖῖῖῖῖ, εῖὀ.) ἁἱP οἱ ἁεῤᾶὀἱ ἁβἱᾶὀᾶε ιᾶ “ἁἱ ÷ ἱᾶὀç” ἁεᾶᾶἱP ὀὀçἱ ḡᾶε ὀοὀὀP εἰεῖὀὀὀ ὀἱ ἁβόεἰὀ.
- **οἰΠἱᾶ (slice):** ἱḡᾶ ὀἱᾶεᾶῖᾶὀç ἁῖὀ ἁβόεἰὀ. ὈYἱὀἱᾶ ιᾶ ὀᾶ ὀῖὀὀὀὀ οἱ PC ἰὀἱἱYἱ ιᾶ ὀὀῤ ÷ ἱὀἱ ιY ÷ ῖᾶ 4 οἰΠἱᾶὀ ὀᾶ Yἱᾶἱ ἁβόεἰ. Ὀᾶ οἰΠἱᾶὀ ἁὀἱᾶεἱYἱᾶε ἁὀἱ ὀἱᾶ ÷ ῖᾶῖὀὀ ὀῖᾶὀὀ (sectors). Ὀὀῤ ÷ ἁε Yἱᾶὀ “ὀβἱᾶεᾶ ὀἱῖῖὀὀἱ” (slice table) ὀἱὀ ὀᾶεY ÷ ἁε ὀεçῖὀῖὀῖὀ ἁεᾶ ὀᾶ οἰΠἱᾶὀ εἰε ÷ nçοεἰἰδιεᾶὀᾶε ἁδῦ οἱ BIOS ἁεᾶ ιᾶ ἁῖᾶᾶ ἁδῦ ὀYἱ ἰδἱῖαβ ιᾶ ἱᾶεἱPὀᾶε ὀἱ οYόόῖᾶ. ἱ ὀβἱᾶεᾶ ὀἱῖῖὀὀἱ εYᾶᾶὀᾶε εἰε “ὀβἱᾶεᾶ ἱῖἱὀὀἱP” (partition table) ὀᾶ ἱῖῖᾶᾶ DOS ὀἱ ὀὀῖ ÷ ἱᾶὀᾶε ἁὀἱ οἱ ὀῖᾶῖᾶἱἱᾶ fdisk.
- **ἱῖἱὀὀ (partition):** ἱḡᾶ ὀἱᾶεᾶῖᾶὀç ἁῖὀ οἰΠἱᾶὀὀ. ὈἱPεῖὀ ÷ nçοεἰἰδιεᾶὀᾶε ἁεᾶ ἱᾶὀῖῖῖ ὀὀὀ ὀἱᾶεᾶῖᾶYὀᾶε ὀἱὀ ὀἱῖῖὀὀἱ (slices) ὀἱὀ ἁβόεἰὀ ὀἱ FreeBSD. ἱῖᾶ ὀYόόῖᾶ ἁἱ ÷ ἁḡἱἱ (filesystem) P ἁὀὀᾶῖYἱὀὀᾶ ἱḡἱçὀ (swap area) ὀἱἱ ἁβόεἰ ἁḡὀὀᾶὀ ὀᾶ Yἱᾶ ἱῖἱὀὀ. Ὀᾶ ἱῖἱὀὀᾶ ὀὀῖ ÷ ἱἱὀᾶε ιᾶ οἱ ἁῖᾶᾶἱἱἱ disklabel.
- **ὀῖYᾶὀ (sector):** Ç ἱεῖῖὀὀᾶῖ ὀἱᾶεᾶῖᾶὀç ἁῖὀ ἁβόεἰὀ. ὈἱPεῖὀ Y ÷ ἁε ιYᾶᾶεἰὀ 512 bytes.

### 1.3 ΟçἰᾱḂᾱ ðῖò ðñÝðᾱé ἰᾱ ðñῖóÝἰᾱðᾱ éᾱé ðᾱᾱḂᾱð

Ἀþóðᾱ ἰᾱᾱÜεç ðñῖóῖ÷þ ðóç ᾱεᾱᾱééᾱóḂᾱ, ᾱῖ ᾱᾱῖ εÜᾱᾱðᾱ ðᾱ ἰÝðñᾱ óᾱð éᾱé ᾱḂἰᾱé εÜεῖð ἰðῖñᾱḂ ἰᾱ éᾱᾱóðñÝðᾱðᾱ ðᾱ ðᾱñéᾱ÷ῖᾱῖᾱ Üεεῖῖ ᾱḂóεῖῖ ðῖò ðóððῖᾱðῖð.

*ðñῖóÝἰᾱð ðé εÜἰᾱðᾱ.* ἈḂἰᾱé ðῖεý ᾱýεῖῖ ἰᾱ éᾱᾱóðñÝðᾱðᾱ εÜεῖð ᾱḂóεῖ ᾱῖðéᾱýῖῖðᾱð ἰᾱ ᾱððÝð ðéð ᾱῖðῖεÝð. Ἀῖ Ý÷ᾱðᾱ ᾱῖðéᾱῖεḂᾱð ᾱéÝᾱἰðᾱ ðᾱ ἰçῖýἰᾱðᾱ ðῖò ððñῖᾱ éᾱðÜ ðç ᾱεᾱᾱééᾱóḂᾱ ᾱéêḂῖçóçð ᾱéᾱ ἰᾱ ᾱñᾱḂᾱ ðç óùóðþ ððóéᾱðþ ᾱḂóεῖð.

ÖðóééÜ ᾱᾱῖ Ý÷ῖðἰᾱ éᾱἰḂᾱ ᾱðéýῖç ᾱéᾱ æçῖéÝð ðῖò ἰðῖñᾱḂ ἰᾱ ðñῖéççεῖýῖ. Ç ᾱðéýῖç ᾱḂἰᾱé ᾱééþ óᾱð!

### 1.4 Zip, Jazz, éᾱé Üεéᾱ ᾱóᾱéñῖῖἰἰᾱῖᾱ ἰÝóᾱ

Ἰé ᾱóᾱéñῖῖᾱñé ᾱḂóεῖé ἰðῖñῖýῖ ἰᾱ ᾱεᾱῖñöüεῖýῖ óᾱῖ éᾱñῖéῖḂ ᾱḂóεῖé. Õῖ óçἰᾱῖðééü ᾱḂἰᾱé ἰᾱ ᾱḂἰᾱé óðῖᾱἰÝñð ἰ ῖᾱçᾱüð ðῖò ᾱḂóεῖð éᾱðÜ ðçῖ ᾱéêḂῖçóç ðῖò ððóðῖᾱðῖð éᾱé ἰᾱ ᾱéðéÝðᾱ ἰÝóᾱ þóðᾱ ἰᾱ ἰðῖñÝóᾱé ἰ ððñῖᾱð ἰᾱ ᾱᾱḂ óùóðÜ ðçῖ ᾱᾱῖᾱðñḂᾱ ðῖò ᾱḂóεῖð. ἘῖéðÜἰᾱð ðé εÝᾱé ç ᾱῖðῖεþ dmesg ᾱéᾱ ἰᾱ ᾱᾱḂᾱ ᾱῖ ç ððóéᾱðþ ᾱḂἰᾱé óðçῖ εḂóðᾱ. Ἀéᾱ ðᾱñÜᾱᾱéᾱἰᾱ ᾱῖ ἰ ððñῖᾱð ᾱñÜðᾱé:

Can't get the size

öüðᾱ ᾱᾱῖ ððÜñ÷ᾱé ᾱéðéÝðᾱ óðῖῖ ῖᾱçᾱü. Ἀῖ ᾱḂἰᾱé ᾱððü éᾱ ðñÝðᾱé ἰᾱ ᾱðᾱῖᾱéééῖþóᾱðᾱ òῖ ἰç÷Üῖçἰᾱ ðñéῖ ᾱῖéçῖÜóᾱðᾱ ἰᾱ ᾱéᾱῖñöþóᾱðᾱ ðçῖ ᾱéðéÝðᾱ.

## 2 Ἀεᾱῖñöþῖῖἰἰᾱðᾱ ᾱḂóéῖðð ᾱéᾱ ᾱðῖééᾱéóðéêþ éᾱéðῖðñᾱḂᾱ

### 2.1 Ἀéóᾱᾱüᾱþ

Ἀððþ ç ðᾱñÜᾱñᾱðῖð ðᾱñéᾱñÜóᾱé ðþð ἰᾱ ððéÜἰᾱðᾱ ᾱḂóéῖðð ἰüñῖ ᾱéᾱ òῖ FreeBSD. ἘðῖçéᾱḂᾱ üðé ἰé ᾱḂóéῖé ᾱðῖééᾱéóðéêþð éᾱéðῖðñᾱḂᾱð ᾱᾱῖ ἰðῖñῖýῖ ἰᾱ ᾱεᾱᾱᾱóðῖýῖ ᾱðü Üεéᾱ éᾱéðῖðñᾱééÜ, ῖýðᾱ ἰᾱ εÜñῖóῖ boot.

### 2.2 Ðþð ἰᾱ ððéÜἰᾱðᾱ ᾱḂóéῖðð ᾱðῖééᾱéóðéêþð éᾱéðῖðñᾱḂᾱð ἰᾱ òῖ Sysinstall

To /stand/sysinstall, òῖ ðñüᾱñᾱἰᾱ ᾱᾱéᾱðÜóðᾱóçð ðῖò ððóðῖᾱðῖð, Ý÷ᾱé ᾱðᾱéðᾱéᾱḂ óðéð ðᾱéᾱððᾱḂð ðῖò ᾱéᾱüóᾱéð þóðᾱ ἰᾱ ᾱðῖῖðῖéᾱḂ ðçῖ ᾱεᾱᾱééᾱóḂᾱ ÷ññéóῖῖý ðüῖ ᾱḂóεῖῖ éᾱé ἰᾱ ᾱðᾱéðᾱḂ ééᾱüðᾱñç ðñῖððÜéᾱéᾱ. Õᾱ ðñῖᾱñÜἰᾱðᾱ fdisk éᾱé disklabel ðῖò ððÜñ÷ῖóῖ ðῖò ðῖò sysinstall ᾱḂἰᾱé ᾱñᾱðééῖý ðᾱñéᾱÜεῖῖðῖð (GUI - Graphical User Interface) éᾱé ἰᾱéþῖῖóῖ òῖ ἰðÝñᾱἰᾱ ðῖò εῖðḂἰᾱðῖð ðüῖ ᾱḂóεῖῖ. ἈḂἰᾱé ðñῖóᾱῖþð ἰ ᾱðéῖεüðᾱñῖð ðñüðῖð ἰᾱ éüðᾱðᾱ ᾱḂóéῖðð ᾱðü ðçῖ Ýéᾱῖóç 2.1.7 éᾱé ἰᾱðÜ ðῖò FreeBSD.

1. Ἰᾱééῖþóðᾱ òῖ sysinstall þð root ᾱñÜῖῖῖðᾱð

```
# /stand/sysinstall
```

óðçῖ ᾱñᾱἰþ ᾱῖðῖεþῖ.

2. ἈðééÝἰðᾱ Index.
3. ἈðééÝἰðᾱ Partition.
4. ἈðééÝἰðᾱ òῖ ᾱḂóεῖ ðῖò εÝéᾱðᾱ ἰᾱ ᾱᾱéᾱðᾱóðþóᾱðᾱ ÷ñçóéῖῖðῖéῖðῖðᾱð ðᾱ ᾱᾱéÜééᾱ éᾱé ἰᾱðÜ **SPACE**.

5. Ἀί εά ÷ ñçóéíðìéþóáðå ùèí òí ἁßóèí ἁέά òí FreeBSD, ἁðéëÝíðå Ἀ.
6. Ἰùèéð óáð ñùðþóáé áí ùíòùð èÝéåðå íá òí èÝíáðå áððù (Do you still want to do this) ἁðáíðþóðå Yes.
7. ἈðéëÝíðå Write.
8. Ἐά óáð ἁḂÛéå íéá ðñíḂéäíðìþçóç ó÷ḂðééÛ íå òçí ἁḂḂḂḂþ ሰ ሰðÛñ÷ííðá óðóðþíáðå ἁðáíðþóðå Yes.
9. Ἰùèéð óáð ñùðþóáé áí èÝéåðå íá ἁḂéáðáóðþóáðå Ḃíá boot loader, ἁðéëÝíðå None ἁέά íá ἁðñóýḂḂðå ïðíéḂḂðñðå ἁèèḂḂþ òðí Master Boot Record. Ç ἁḂéáðÛóðáóç Ḃíùð boot loader ÷ ñḂéÛḂḂðå ùñí óå éḂéñýñéḂð ἁḂéáðáóðÛóáéð òí FreeBSD þ áí ó÷ḂḂéÛḂḂð íá òíðñéḂðþóáðå òí ἁßóèí óå èÛðñéí Ûèèí íç÷Ûíçíá.
10. Ðáðþóðå **ENTER** òðí ḂíçíḂñùðéèù ïþñíá ðñ èÝḂé “Wrote FDISK partition information out successfully”.
11. ἈðéëÝíðå Quit ἁέά íá ἁḂḂðå ἁðù òí FDISK Editor éḂé ïðÛ **ESCAPE** ἁέά íá ἁðéóðñÝðåðå òðí Index menu.
12. ἈðéëÝíðå Label ἁðù òí Index menu.
13. ἸñÛóðå òí ἁßóèí óáð ùðùð èÝéåðå (ḂḂþ ïñþḂḂðå óå partitions). Ἀí èÝéåðå ùñí Ḃíá partition ðáðþóðå òí c ἁέά íá ḂçíéíðñḂḂðå òí partition. ἸðÛ ἁðèðð ἁḂ÷èḂðå ðéð ðñíḂðéèḂḂð ἁέά óå ðñíéḂéñéíéóí Ḃíá size, partition type Filesystem, éḂé mountpoint (òí ïðñí ḂḂí ÷ ñçóéíðìéḂḂðé).
14. Ðáðþóðå w ùèéð ðḂḂéþóáðå éḂé ἁðéèðñþóðå ðéð ἁèèḂḂð ἁέά íá óñíá÷þóðå. Òí filesystem èḂ ᰄḂḂḂḂḂ ἁðùðáðå ἁðù òçí Ḃíðñéþ newfs Ḃéðùð áí ἁðéëÝíðå òí ḂíðþèḂðñ. (Ἀí ḂÛḂḂð éḂéñýñḂḂí partition óáð óðñḂÝñḂé íá òí èÝíáðå!). Ἐά óáð ḂþóḂé òí èÛèð:

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

ἈḂñþóðå òí.

15. Ðáðþóðå óñíá÷ḂḂḂ òí **ESCAPE** ἁέά íá ἁḂḂðå.

## 2.3 Ðùð íá ððéÛíðå ἁßóèíðð ἁðñéḂḂéóðéèþð èḂéðñḂḂḂḂð ïÝóá ἁðù òçí ḂḂḂḂþ Ḃíðñéþí

ἈèðḂéÝóðå ðéð ᰄḂḂḂḂḂ ḂíðñéÝð ḂíðéḂḂéóðþíóðå òí ad2 íå òí ùñíá òçð óðóéḂḂð òíð ἁßóèñ (ḂñÛððå dmesg íá ḂḂÝḂḂð áí ḂḂḂé òùóðù).

```
# dd if=/dev/zero of=/dev/ad2 count=2
# disklabel /dev/ad2 | disklabel -B -R -r ad2 /dev/stdin
ḂÝèñðñ ùñí Ḃíá partition, ïðùð ïðññýñá íá ÷ ñçóéíðìéþóíðå òí èññÛðé 'c':
# newfs /dev/ad2c
```

Ἀí ÷ ñḂéÛḂḂðé íá ḂèèÛíðå òí disklabel ἁέά íá ÷ ñçóéíðìéþóáðå ðñéḂḂðÛ partitions (Ḃéá ᰄḂñÛḂḂḂḂ áí èÝéåðå swap) ðùðå èÛíðå:

```
# dd if=/dev/zero of=/dev/ad2 count=2
# disklabel /dev/ad2 > /tmp/label
Ἀñþñðå òí disklabel Ḃéá íá ðñíðéÝóððå partitions:
# vi /tmp/label
# disklabel -B -R -r ad2 /tmp/label
ḂèðḂéÝóðå òçí Ḃíðñéþ newfs óðå partitions ùðùð ðñÝðḂé
```

Ἰ ἁßóèñ óáð ḂḂḂḂ Ḃñéññð ðññð ÷ ñþóç.

3 Äéáìĩñöþíííôàò äßóêîĩò ãéá óõîâáôÐ ëäéôîĩñãßá

### 3.1 ÁéóáñùñÞ

Ç añāñiP āřōreþř āřřāē řāř ĩ āōēreuoāñřō ãñũđřō āēā řā uōēŪřāōā āřōēřōđ āđřēēāēōōēēđō ēāēōřōñāřāđō āēēŪ āřřāē ēāē ĩ āōōēreuoāñřō āēā řā uōēŪřāōā řōřāāōřō āřōēřōđ. Ōř fdisk āđũ ōçř āñāñiP āřōreþř ēŸēāē đāñēōōũōñāñāđ āřřōāēđ řāēçřāōēēřř ēāē đřēēŸō āřřōāēđ ō÷āōēēŪ řā ōř đřāřāē ēñřāōēřř, ēŪōē đřō đñřōāřřō āāř ÷ñāēŪēāōāē řā ĩŪēāōā. Āē āđōũ ÷ñçōēřřđřēēđōđā ōř sysinstall āēā řā uōēŪřāōā řōřāāōřō āřōēřōđ āēřēřōēþřāōđ ōēđ řāçāřāđ đāñāēŪōũ.

### 3.2 Δρò íà ööëÛîâöâ äßóëîõò óõîââöðò ääëôîõñâßàò ìà ôî Sysinstall

1. ÎâêíÐóâ ôï sysinstall þò root ãñÜöííôáò

```
# /stand/sysinstall
```

óôçí ãñáììÐ áíôïëþí.

2. Ἀδελφὸς Ἰωάννης Index.
3. Ἀδελφὸς Ἰωάννης Partition.
4. Ἀδελφὸς Ἰωάννης οἱ ἀβελεῖς διὸ ἐΥεῖς αἱ ἀρεταὶ αὐτοῦ ποῦ αὐτὸν ÷ ἡγοῦνται ὅτι αὐτὸς ἔχει ἐὰν ἴσῃ **SPACE**.
5. Αἱ εἰς ÷ ἡγοῦνται ὅτι ποῦ αὐτὸς ὑεῖ οἱ ἀβελεῖς ἄρα οἱ FreeBSD, Ἀδελφὸς Ἰωάννης A.
6. ¼αἱ αὐτὸς αὐτὸς αὐτὸς:

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)?

(ÈYēāōā īā ōī ēŪīāōā āōōū īā ðñāāīāōēēŪ ēmŪōēā āēā īā ðāñāīāBīāē ōōīāāōūōū īā Ūēēā ēāēōīōñāēēŪ  
ōōōōPīāōā?) ÁðāīōPōōā  $y_{es}$ .

7. **ΆδεέΎίδα** Write.
8. ¼δαί οάδ æçðçëåß íá ääëááóðßóåðå öíí boot manager, áðëéΎίδα None íà öí **SPACE** éáé íåðÛ **ENTER** äéá OK.
9. Quit (ääåßðå) áðu öí FDISK Editor.
10. Èá οάð ñùðßóåé èÛðé ò÷-åðëü íà öíí boot manager ðÛëé, áðëéΎίδα None íáfÛ.
11. **ΆδεέΎίδα** Label áðí öí Index menu.
12. ÍñÛóå öí åßöëí üðüð èΎëåðå (ääß éå ïñßóåðå óá partitions). Áí èΎëåðå íüí Ύία partition áðëð åå÷-ëåßåðå óéð ðñíäëëëΎð äéá óá ðñíëåññéóíΎία size, partition type filesystem, éáé mountpoint (öí íðíßí ååí ÷ñçóéíðíëåßóåé).
13. Öí filesystem éå ðñåáóåß áóðüååáá áðu öçí áíöíëß newfs åëüüð áí áðëéΎίδα öí áíóðëåöí. Áí åÛæåðå éáéñññåéí partition οάð óöíÛñåé íá öí èÛíåðå! Èå οάð åðóåé öí èÛèð:

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

ÁãíîÞóôâ ôï.

14. ÐáôÞóôâ óõíá÷üìáíá ôï **ESCAPE** ãéá íá âãâðôâ.

Ἰ ἁΒόέìð óáð ἁΒίᾶέ Ὡòìèìð ðñìð ÷ ñÞόç.

## 4 ¶èèàð èᾶέòìðñᾶΒàð ιᾶ òìðð ἁΒόέìðð

### 4.1 ÐñìóέÝòììðáð swap.

Ἐᾶèðð Ὡίᾶ óýóçìᾶ ἁðᾶèðᾶΒίᾶðᾶέ, ç ἁίŮᾶèç ἁέᾶ ιᾶᾶᾶýòᾶñì swap ἁΒίᾶðᾶέ ùèì ἕᾶέ ðéì ἁðéóᾶéðéèÞ. Ðᾶñùèì ðìð òì ιᾶ ðñìóðᾶèᾶΒ swap óᾶ Ὡίᾶί ððŮñ ÷ ιíðᾶ ἁΒόέì ἁΒίᾶέ ðññᾶñŮ ἁýóèèèì, Ὡίᾶð ἕᾶέιγñᾶéìð ἁΒόέìð ιðñᾶΒ ιᾶ ιñòìððéçèᾶΒ Ὡóóé þóðᾶ ιᾶ ðᾶñéÝ ÷ ᾶέ òì ἁðéðèÝí swap ðìð óáð èᾶΒðᾶέ.

Ἄέᾶ ιᾶ ðñìóέÝóᾶðᾶ swap ἕᾶèðð ἁŮᾶᾶðᾶ Ὡίᾶ ἁΒόέì óòì óýóçìᾶ:

1. Ἐᾶèðð èüᾶᾶðᾶ òì ἁΒόέì (partitioning) ἁèèŮìðᾶ òì disklabel ἕᾶέ ιñΒóðᾶ ÷ þñì ἁέᾶ swap óòì èñìŮóé (partition) ‘b’ ἕᾶέ ἁŮèðᾶ òìí ððùèèéðì ÷ þñì óᾶ èŮðìéì Ůèèì èñìŮóé, ð.÷. óòì ‘a’ Þ óòì ‘e’. Òì ιÝᾶᾶèìð ðìð ἁΒίᾶðᾶ ἁΒίᾶέ óᾶ blocks òùí 512 bytes.
2. ¼ðᾶί èŮíᾶðᾶ newfs óòì ἁΒόέì, ἸÇÍ òì èŮíᾶðᾶ óòì èñìŮóé ‘c’. Ἀίðèᾶᾶᾶ, èŮíᾶð òì ιùíí óòì èñìŮóé ðìð ἁᾶí ἁΒίᾶέ swap.
3. ÐñìóέÝóðᾶ óòì /etc/fstab òì ðᾶñᾶéŮòù:

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

ἈèèŮìðᾶ òì /dev/ad0b óòì ùíñᾶ òçð ἕᾶέιγñᾶéᾶð óáð óðóéᾶððð.

4. Ἄέᾶ ιᾶ ἁíᾶñᾶìðìéÞóᾶðᾶ Ůìᾶóᾶ òì ιÝí swap ÷ ñçóéììðìéÞóᾶðᾶ òçí ἁíðìèÞ swapon

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

### 4.2 ἈίðéᾶñŮòììðáð óᾶ ðᾶñéᾶ ÷ ùìᾶίᾶ ἁΒόέùí

Ἀðù òìí: Renaud Waldura (<renaud@softway.com>)

Ἄέᾶ ιᾶ ιᾶðᾶééíÞóᾶðᾶ ἁñ ÷ ἁΒᾶ ἁðù òìí ἁñ ÷ èèü óáð ἁΒόέì óᾶ Ὡίᾶί ἕᾶέιγñᾶéì, èŮíᾶð:

```
# 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>)

Ià ôi Concatenated Disk Driver, Ð áëëépò CCD, ïðñáßòá íá Ý÷-àòá ðñèýýò ùìéòòò àßóèòò áëÛ íá óòïðñéòÝññíòáë ùò Ýíáð. Ç áëáááëáòá ëÝÝáòáë óðá÷-þñáðóc (striping). Ià ôçí áðëëüëëçóc Ý÷-àòá éäýýòññá áðñòáëÝíòáòá óðçí óá÷-ýðçóá áðáëäÐ ñénÜæñíòáë íë áñññáòÝð éäë íë áñññíðóáëð óðñòò àßóèòò. ÁëáÜòòá ðéð manual pages ccd(4) éäë ccdconfig(8) Ð ôçí áñ÷ëÐ óäëßá ðñò CCD (<http://stampede.cs.berkeley.edu/ccd/>) áëá ðññéóóúðññò éäðñÝññáëð.

Ā́éá íá òñŸíâôâ CCD ðēÝíí âáí ÷ñâēŬæâóââ âéâéü ðõñÞíá. Ìâ ôçí áíôíēÞ ccdconfig, öĩñðÞíâôâé ôí éâôŬēēçĩ  
KLD áóôüíâôâ áí ĩ ðõñÞíâôâ âáí Ý÷âé Þæç õðíóôÞñéíç áéá CCD.

Ôá CCD ððēŨ ÷ fīfðáē óá partitions ðŷðīð 4.2BSD. Áí ēŷŷēðá óá ÷ ñççēŷīðŷēðēðáðá uēŷ ðŷŷ āððēŷ ēáē ðŨēē ðñŷðáē íá ððēŨŷðáð ŷŷá ŷŷŷ partition. Āēá ðāñŨāēēāŷ, ç áŷðŷēð **disklabel -e** ððñāð íá āāðŷāē:

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

Άάρ ιδññâßôâ íá ÷ ñçôèîüðñēĐôâôâ ôï partition  $c$  άέά CCD, äöüóñí áßíáé öýðñö *unused*. Áíôßèâôâ äçíèíôñâĐôââ Ýíá íÝí  
 partition äêñéâðò ßäéíò íââÝèíöð áéèÛ öýðñö 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)
```

Ā́éá íá áçierōñāPóáôā Yía íYī CCD, âêôâĒYóôâ ôéô đăñăĒÛôù áíôĒĒYô. ĐăñăñĀÛôĩôĩ đpò íá đñĩróĒYóáôâ ôñăđô  
 âđôêĩrôđ. Áđêđô âêĒÛĩôâ ôéô ôôôêăôYô ũđĩđ ÷ñăĒÛăăôăĒ. Êôĩçăđăđôâ ũêê ĩē âđôêĩē đñYđăē íá âđăĒă ũĩĩēĩē.

```
# cd /dev ; sh MAKEDEV ccd0

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

# disklabel -e da0
ᐃᑦᑦᑦᑦᑦᑦᑦᑦ ᐃᑦᑦᑦᑦᑦᑦ 4.2BSD
# disklabel -e da1
ᐃᑦᑦᑦᑦᑦᑦᑦᑦ ᐃᑦᑦᑦᑦᑦᑦ 4.2BSD
# disklabel -e da2
ᐃᑦᑦᑦᑦᑦᑦᑦᑦ ᐃᑦᑦᑦᑦᑦᑦ 4.2BSD

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

# newfs /dev/ccd0c
```

Ç ôêĤ 273 âbíáé ôĭ ĩŸääèò ôĭô stripe. Åbíáé ĭ áñéèüò ôúi sectors (512 bytes ĭ êâéŸíáo) óá êÛèâ block äääñŸíuí ôĭô CCD. Èá ðñŸðâé íá âbíáé ôĭôÛ÷éóóĭ 128 kB, êâé äâĭ ðñŸðâé íá âbíáé äŸíâĭç ôĭô 2.

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

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

## 5 Ἀð÷ᾗñéóôþàò

Ì óðᾗᾗᾗᾗᾗÝᾗò ἑά þἑᾗἑᾗ ἰά ᾗð÷ᾗñéóôþáἑ ôïòð ðᾗᾗᾗᾗᾗᾗᾗᾗ ᾗἑά ôçí óðἰᾗἑóóöïñᾗᾗ ᾗïòð óᾗ ᾗððþ ᾗçí ᾗñᾗᾗóþᾗ ᾗïòð:

- Darryl Okahata (<darrylo@hpnmhjw.sr.hp.com>) ᾗἑά ôἑð ᾗðἑÝò ἰᾗçᾗþᾗð ᾗᾗἑᾗðᾗóðᾗóç þἰùð ᾗþἑἑἑò óᾗ ᾗðἑἑᾗἑóóἑἑἑ ᾗñüðἑ ἑᾗἑóἑἑᾗᾗᾗᾗð, ἑἑð ἰðἑþᾗð Ý÷ᾗ ðἑἑἑÝð ᾗñᾗÝð ÷ñçἑἑἑἑðἑþᾗἑ óçí FreeBSD-questions.
- Jordan K. Hubbard <jkh@FreeBSD.org> ðἑò Ýἑᾗᾗᾗ ᾗἑ sysinstall ÷ñþἑἑἑ ᾗἑά ôÝἑἑἑἑ ᾗþᾗἑðð ᾗἑἑᾗἑÝð.
- John Fieber (<jfieber@indiana.edu>) ðἑò Ýᾗùóᾗ ἑἑð ðἑçñἑἑἑᾗᾗᾗ ἑᾗἑ óᾗ ðᾗᾗᾗᾗᾗᾗᾗᾗ ᾗἑά ᾗἑ DocBook DTD ðᾗἑἑ ᾗἑᾗ ᾗðἑᾗ ᾗἑ ἑᾗþᾗᾗᾗ ᾗᾗóþᾗᾗᾗᾗᾗ.
- Greg Lehey <grog@FreeBSD.org> ðἑò Ýἑᾗᾗᾗ ᾗçí ᾗἑἑᾗᾗᾗᾗ ἑἑò, øᾗ÷ᾗἑἑᾗð ᾗἑά ᾗἑᾗᾗᾗᾗᾗᾗᾗ, ἑᾗἑ ᾗἑά ᾗçí ᾗðἑἑððñἑἑç ᾗἑò óᾗ ᾗἑᾗᾗᾗᾗ ἑÝἑᾗᾗᾗ.