

Ç ĨñãŨíùóç ôùí Âêäüóâùí ôĩõ FreeBSD

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\$FreeBSD: release/8.4.0/el_GR.ISO8859-7/articles/releng/article.xml 39632

2012-10-01 11:56:00Z gabor \$

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Άδου οĩ Ũñēñĩ ðañēāñŨōāē ôçĩ áíôēíāðþðēóç ēāē ĩñãŨíùóç ôçð ñŨāāð áíŨððôĩçð ôĩõ FreeBSD, ũôĩí áöĩñŨ óôçĩ ðñĩāðĩēíāóßā ðĩēĩðēēþĩ āēäüóâùí ôĩõ Êāēðĩõñāēēĩý Óðóðßíāðĩõ FreeBSD. Âĩçāāß ĩā ēāððñŨñāēā ôçĩ ĩāēĩāĩēĩāßā ðĩõ ÷ñçóēĩĩðĩēāßðāē āēā ðēð āðßóçĩāð āēäüóāēð ôĩõ FreeBSD ēāē ðañēāñŨōāē óā āñāāēāßā ðĩõ āßíāē āēāēÝóēíā óā ũôĩõð āíāēāóŨñĩíóāē ĩā ðañŨāĩĩĩ ðañāĩāðñĩðĩēçĩÝĩāð āēäüóāēð ôĩõ FreeBSD āēā āóùðāñēēþ ð āĩðĩñēēþ ÷ñþóç ēāē áíŨððôĩç ðñĩũĩĩôũĩ.

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1 Âēóāāũāþ

Ç áíŨððôĩç ôĩõ FreeBSD āßíāē ĩēā ðĩēý āĩē÷ðþ āēāāēēāóßā. Ôĩ FreeBSD áðĩðāēāßðāē áðũ óðĩāēóũĩñÝð ÷ēēēŨāũĩ āĩēñþðũĩ áðũ ũēĩ ôĩĩ ēũóĩĩ. Ç ñŨāā ôĩõ FreeBSD ðañŨŨ÷āē ðñũóāāóç ĩÝóũ āĩþĩðĩĩõ CVS[1] óā ũēĩõð, Ýðóē þóðā ĩā ĩðĩñāß ũðĩēĩð ēÝēāē ĩā āāē ĩçýĩāóā log, āēāōĩñŨŨð (patches) ðĩõ Ý÷ĩĩĩ óā āēŨōĩñā development branches, ēāē Ũēēā ÷āñāēðçñēóðēēŨ ðĩõ āĩçēĩýĩ ôçĩ áíŨððôĩç, óā ĩðĩßā ðñĩēýððĩĩĩ áðũ ôçĩ ÷ñþóç āĩũð áððóçñĩý óðóðßíāðĩõ āēā÷āßñēóçð ēþāēēā. Áðũ āðĩðÝēāóā ēāē ôĩĩ ðēĩ ôçĩāíðēēũ ðañŨāĩĩĩā Ýēĩçð āēā Ýĩā ĩāāŨēĩ āñēēĩũ áðũ óāēāĩðĩý÷ĩõ ðñĩāñāĩĩāóēóðÝð áðũ ũēĩ ôĩĩ ēũóĩĩ óōĩ FreeBSD. Âßíāē ðñĩóāĩŨŨð, āÝāāēā, ðũð ðĩēý óýĩðñā ēā āß÷ā āßíāē āĩóāēþð ÷āĩðēēþ ç ēāðŨóðāóç āĩ āß÷āĩ ũēĩē, áðũ ũēĩ ôĩĩ ēũóĩĩ, ðñũóāāóç ĩā āñŨŨĩĩĩ óôĩĩ ēþāēēā. Âē' áððũ, ĩũĩĩ

ιέα “[ἀδελῶται Ὑψι](#)” νῦν ἂν ἀδὺ οἰκονομῶν 300 Ὑπὸν Ἄ-ῖοι δὲν οὐαῶαός ιά ἂν Ὑπὸι οἰοι CVS repository. ἈδὲιB ιέ *committers*[6] ἂν ιάε ὀδᾶγῶνιε ἁεά οἰ ιαᾶᾶγῶνι ιῖνι οἶο ἀῖ Ὑδὸοῖοδ ὀι ἂν ιᾶοᾶε οἰο FreeBSD. Ιέα *ἐλὶοῖνῆB-νῖν*[7] (core team) ἀδὺ ἁεᾶἁἁἁἁἁἁἁἁ ὀνι ἁἁἁἁἁἁἁἁἁἁ ὀ ἁεῖ Ἄᾶοᾶε ἁεά ιά ὀᾶν Ἄ-ᾶε ἔ Ὑδὲιῶ ἂν ἁἁἁἁ ἔᾶῖᾶᾶᾶᾶ ἔᾶε ιέα ἔᾶὀᾶγῶῖοῖο οἰο ὀῖνι οἰοι committers.

Ίε όα÷ýόάοίε ηόειηβ άίΰδδοίçό όίό FreeBSD άάί άόβήόί έάέ δίεý ÷ññί άέα όί ίάέάέΰñέόίά όίό όόόόβίάόίό άίΰδδοίçό όά ίέα Ύέάίόç ίά δίέυόçόά όίό ίά άίβέάέ ίά ÷ñçέόίόδίέάβόάέ άόñΎύό. Άέα ίά έόέάβ άόόü όί άέέέçίά, ç άίΰδδοίç άβίάόάέ άάόόü÷ññίά όά άόί όάνΎέέçέά ίññδΰόέα. Ί έýñέίό έίññüό άίΰδδοίçό άβίάέ í **HEAD** þ **trunk** όόί CVS repository ίάό, άίύόόüό έάέ üό “FreeBSD-CURRENT”, þ “-CURRENT” άί όόίόñβά.

Για όποιον θέλει να εγκαταστήσει το FreeBSD-STABLE, αρκεί να κάνει μια κλήση στο CVS repository, όπως εξηγείται παρακάτω, ή να χρησιμοποιήσει έναν από τους mirrors. Το FreeBSD-CURRENT [8] είναι η τελευταία έκδοση του FreeBSD, ενώ το FreeBSD-STABLE είναι η τελευταία έκδοση που είναι έτοιμη για να χρησιμοποιηθεί. Το FreeBSD-STABLE είναι η τελευταία έκδοση που είναι έτοιμη για να χρησιμοποιηθεί, ενώ το FreeBSD-CURRENT είναι η τελευταία έκδοση που είναι έτοιμη για να χρησιμοποιηθεί.

[illegible]

Όρία÷πρ οόÝεñíρσάε áδñ òíρð ÷ñÞρðð ìáð áíáρíñÝð ðñíáεçíÛòñí εάε áεðÞρáεð áεá εάεñýñεá ÷áñáεðçñεóóεéÛ, εáòÛ òç áεÛñεάεá òíρ εýέεíρ òçð εÛεá Ýέáñρçð. Íε áíáρíñÝð ðñíáεçíÛòñí áεóÛáñíρáε òççí áÛòç **GNATS**[9] íÝòñ e-mail, ìá òççí áòáñíñáÞ send-pr(1), Þ íÝòñ òíρ web-interface ðíρ ðáñÝ÷áðáε òççí áέáýέðíρçç <http://www.FreeBSD.org/send-pr.html>. Áέòñð áðñ òέð áεÛòññáð εßòðáð çεáεðñííεéý ðá÷ðáññáÞíρ ìá εÝíá ðá ðá÷íεéÛ ÷áñáεðçñεóóεéÛ òíρ FreeBSD òðÛñ÷áε εάε ç εßòðá FreeBSD Quality Assurance mailing list (<http://lists.FreeBSD.org/mailman/listinfo/freebsd-qa>), ç íðíβá ðáñÝ÷áε Ýíá òññíòí áεά òάεçðÞρáεð ó÷áðééÛ ìá ðέð εáððñÝñáεáð òçð “íñáÛúρòçð ðñí áεäñóáññ”.

[illegible]

Οι ΟιΠια 2 αἰχαᾶῖῖ ἰᾶ εᾶδδδδῖῖῖᾶεᾶδ δᾶ ᾶεῖῖῖῖᾶ δδῖῖᾶεᾶ δςδδ ᾶεᾶᾶεᾶδδᾶδ δῖῖ ᾶῖῖῖῖᾶδᾶε δδῖῖᾶ ᾶδῖ ἔῖῖᾶ ῖᾶᾶῖῖ, ἰῖ - ῖῖ εᾶε δᾶ ᾶῖᾶᾶ δῖῖ ῖᾶᾶῖῖ ὀδςδ ἰᾶδᾶᾶῖῖῖῖδςδ δῖῖ ὀδδδῖᾶᾶῖῖ εᾶε δῖ Ὀῖῖᾶ 3 ᾶἰᾶᾶῖ ὀςδ ῖᾶᾶ δς ᾶεᾶᾶεᾶδᾶ δςδ ἰᾶδᾶᾶῖῖῖῖδςδ. Οι ΟιΠια 5 δᾶῖᾶῖῖᾶ δῖῖ δῖῖᾶῖ ἰᾶ ᾶδᾶᾶᾶᾶῖ ὀῖ ᾶᾶᾶᾶ ὀῖῖᾶ ᾶδῖ ὀῖῖᾶῖῖδ εᾶε δῖ ΟιΠια 6 δᾶῖᾶῖῖᾶ εῖῖᾶᾶ ᾶδῖ ὀᾶ δῖῖᾶᾶᾶ δῖῖ ἰῖᾶᾶ ᾶδῖ ὀςδ ᾶεᾶᾶεᾶδᾶ ῖᾶᾶῖῖδ δῖῖ FreeBSD 4.4. Ὀῖῖῖ, δῖ ΟιΠια 7 δᾶῖῖῖῖᾶ εῖῖᾶᾶ ᾶδῖ ὀᾶ εᾶδᾶᾶῖῖᾶᾶ δῖῖ εῖῖῖῖ ἰᾶ δῖᾶᾶ ᾶ ᾶῖῖῖῖῖ ὀᾶ ἰῖῖῖ.

2 Ç Äéääéêáóßá Åçïéïõñãßáo ìéàò êäïóçò

Ié rYáo àèauóáoè òrò FreeBSD óòèÜ ÷ fróáè áðu òrò -STABLE èròu áfÜðòòçð ðàñðòrò èÜèà èÝóóàñàèò ìPráo. Ç
 àèàèèàóòà ðñàòòèàóòàò èáo Ýèàòçð ìàèèÜèà ó ÷ àauì 45 ìÝñàð ðñèí òçì áíáíáíáíá çìàññçíòà Ýèàòçð, uòáí ì
 òðàýèèòrò àèauóáuì òrò FreeBSD óóÝèíàè Ýíà àñÜñà óòèð èòóòàð òuì ðñàñàñàòèóòòr àèà íá òðàíèòìòàè óòòò
 ðñàñàñàòèóòòÝò uòè Ý ÷ òrò 15 ìÝñàð èàèñù íá èÜñòr uðèèáo àèèáÝò èÝèòr, ðñèí òì ðÜàñà òrò èòàèè. ÌÝóá óà

áòòü òĩĩ éáénü, ðĩēēĩß ðñĩāñāñĩáòéóóŸò ēŪĩĩōĩ ĩéá óáēñŪ áðü áēēááŸò ðĩō Ÿ ÷ ĩōĩ ĩāßĩáē ðēŸĩĩ āñüóóŸò ùò “ĩāēáēāñßōĩáóá MFC”. Ī ũñĩō MFC óçĩāßĩáē “Merge From CURRENT” éáē ðāñēāñŪōāē óçĩ áēááēēáóßā ðñĩóāñĩĩāßò òĩō ēßāēēá ĩéáò āĩēēĩáóĩŸĩçò áēēáāßò áðü òĩĩ -CURRENT ðāñēāñĩáóēēü ēĩñĩü áñŪðòōĩçò óòĩĩ óóāēāñü -STABLE ēĩñĩü.

2.1 ĩēāā ÷ ĩō ēßāēēá

ŌñēŪĩóá çĩŸñāð ðñēĩ óçĩ áĩāĩāñĩāĩç çĩāññĩçĩßā Ÿēāĩōçò, ĩ ēßāēēáð òĩō repository áéóŸñ ÷ āðáē óā ĩéá ðāñßĩāĩ “ēáēóóóŸñçòçò”. ÉáòŪ óç āēŪñēāēá áòðßò òçò ðāñēüāĩō, ũēāð ĩē áēēááŸò óòĩĩ -STABLE ēĩñĩü ðñŸðāē ĩá Ÿ ÷ ĩōĩ óçĩ Ÿāēñēóç òçò ĩñŪāā ĪñāŪtūoçò òuĩ Āēäüoäüĩ <re@FreeBSD.org>. Īē áēēááŸò ðĩō āðēóñŸðĩĩóáē óā áòðß òçĩ ðāñßĩāĩ ðĩō áēāñēāß 15 çĩŸñāð āßĩáē:

- Āēĩñēßóāēð āñüóóßĩ ðñĩāēçĩŪðuĩ.
- Āĩçĩāñßóāēð óóçĩ ðāēĩçñßüóç.
- ĀēēááŸò ó ÷ āðēēŸò ĩā óçĩ áóðŪēāēá.
- ĪēēñŸò áēēááŸò óòĩōð ĩāçāĩŸò ðóóēāðßĩ, ũðüð ð. ÷. ç ðñĩóēßēç òuĩ IDs ĩŸüĩ óóóēāðßĩ.
- Īðĩēāāßðĩōā Ūēēç áēēáāß ðēóóāŸāē ç ĩñŪāā áñŪðòōĩçò ũóē ðñŸðāē ĩá āßĩáē, ĩā òĩ áĩāĩāñĩāñĩ ðŪĩóā ñßóēĩ.

ĪāòŪ ðēò ðñßóāð 15 ĩŸñāð ēáēóóóŸñçòçò, òðēŪ ÷ ĩāðáē ĩéá āĩēēĩáóóēēß Ÿēāĩōç áēá ĩá ÷ ñçóēĩĩðĩēçēāß óāĩ āĩēēĩß òçò ðāēēēßò Ÿēāĩōçò éáē ĩ ēßāēēáð áéóŸñ ÷ āðáē óā ĩéá ðāñßĩāĩ “ðāāßĩāĩōĩō”. ðēŸĩĩ āßĩáē ðĩēŸ ðēĩ āŸóēĩēĩ ĩá āßĩĩōĩ ĩŸāð áēēááŸò óòĩ āŸóóçĩā, āēóüð ēē áĩ āēĩñēßñĩōĩ ēŪðĩēĩ ðĩēŸ óĩāāñü bugß ēŪðĩēĩ ðñüāēçĩā áóóŪēāēáð. ÉáòŪ óç āēŪñēāēá òĩō ðāāßĩāĩð òĩō ēßāēēá, òĩōēŪ ÷ éóòĩĩ ĩßā āĩēēĩáóóēēß Ÿēāĩōç òðēŪ ÷ ĩāðáē ēŪēā āāāñŪāā, ĩŸ ÷ ñē ĩá āßĩáē Ÿóĩēĩç ç ðāēēēß Ÿēāĩōç. Ōēò çĩŸñāð áēñēāðð ðñēĩ óçĩ ðāēēēß Ÿēāĩōç, ç ĩñŪāā ðĩō āßĩáē òðāŸēōĩç áēá ðēò āēäüoäēð āßĩáē óā óòĩā ÷ ð āðēēĩēñĩßā ĩā óçĩ ĩñŪāā áóðŪēāēáð, óçĩ ĩñŪāā óòĩōßñçòçò òçò ðāēĩçñßüóçò, éáē óçĩ ĩñŪāā óòĩōßñçòçò òuĩ ports, áēá ĩá āāāāēüēĩŸĩ ðüð ũēā óā áðāñāßòçòā ēñĩŪðēá áēá ĩéá ðēßñç Ÿēāĩōç āßĩáē áēáēŸóēĩā.

2.2 Ēßóóā ĀēŸā ÷ ĩō òçò Ōāēēēßò ēāĩōçò

¼óāĩ āñēāðŸò āĩēēĩáóóēēŸò āēäüoäēð Ÿ ÷ ĩōĩ āßĩáē áēáēŸóēĩāð, Ÿ ÷ ĩōĩ āĩēēĩáóóāß áðü āñēāðü ēüóĩĩ éáē ũēá óā óĩāāñŪ ēŸĩāóā Ÿ ÷ ĩōĩ áĩāēðēāß, ç ðāēēēß Ÿēāĩōç ĩðñāß ĩá āñ ÷ ðóāē.

2.2.1 Āçĩēĩōñāßā òĩō ēĩñĩŸ ēāĩōçò

¼ðüð ðāñēāñŪøāĩā óóçĩ áéóáāñāß, ĩē ēĩñĩĩß RELENG_X_Y āßĩáē ĩéá ó ÷ āðēēŪ ĩŸā ðñĩóēßēç óóçĩ ĩāēĩāĩēĩāßā òuĩ āēäüoäßĩ ĩāð. Ōĩ ðñßōĩ āßĩā óóçĩ āçĩēĩōñāßā áóòĩŸ òĩō ēĩñĩŸ āßĩáē ĩá āāāāēüēāßòā ũóē āĩōēāŸāðā ĩā óçĩ ðāēāðóāßā Ÿēāĩōç òĩō ðçāāßĩō ēßāēēá áðü òĩĩ RELENG_X ēĩñĩü áðü òĩĩ ĩðĩßĩ ēā òðēŪĩāðā òĩ ĩŸĩ ēĩñĩü.

```
/usr/src# cvs update -rRELENG_4 -P -d
```

Ōĩ āðüāñĩ āßĩā āßĩáē ĩá āçĩēĩōñāßóāðā ĩéá āðēēŸðā (tag) óòĩ óçĩāßĩ āēēßĩçòçò òĩō ēĩñĩŸ, ðóóā ĩá ĩðñāßòā ĩá āāßòā ðēò áēáóĩñŸò ĩā óçĩ āñ ÷ ð òĩō ēĩñĩŸ āŸēĩēā óòĩ ĩŸēēĩ ĩā òĩ CVS:

```
/usr/src# cvs rtag -rRELENG_4 RELENG_4_8_BP src
```

Éáē òüðā ĩðñāßòā ĩá āçĩēĩōñāßóāðā òĩ ĩŸĩ ēĩñĩü ĩā:

```
/usr/src# cvs rtag -b -rRELENG_4_8_BP RELENG_4_8 src
```

ΌçιαΒυθός: *Ιέ άόέέΥόάδ RELENG_ * άβίάέ άάόίάόιΥίαδ άέα ÷ ηΡόç áδũ ôĩôð CVS-meisters έάέ ôçĩ ιιŨää ôυι
άέάυόάυι.*

Ἰ ὑπὸ “*ἀόεῤῥα*” ἀβιάε ἡντιβὰ οἷο CVS. Ὁζιαβιάε Ἰία ὑπὸ δὲ ἐαεῖνβᾶε ἰεά οἰαεῖνβᾶε Ἰίε Ἰεαῖος οἷο ἐπαεῖα οἷο
 ÷ πῦθ. × ἡζοεῖνβᾶε οἰαεῖα οἰαεῖ ὁζαβᾶ ἐπαεῖα ἡζοεῖα ὑπὸ οἰαεῖα οἷο Ἰεεῖ ἡεαῖοαεῖ οἷο FreeBSD ἰα
 ἡνβᾶε ἐαε ἰα ÷ ἡζοεῖνβᾶε ἀεῖα οἷο ὅτ βαεῖ ἐπαεῖα δὲ ÷ ἡζοεῖνβᾶε ἐαεῖ ἀεῖ οἷο ἡνβᾶε ἡεαῖοαεῖ οἷο Ἰεαῖο
 οἷο FreeBSD.

2.2.2 ÁõîÛííîáò ôíí Áñéèü êäíóçò

Δνείρ ιδᾶε ϣ ἀοέεΥόα, ιᾶοᾶεϋοῦοεοόαβ εᾶε ἀοιτῆαοόαβ ϣ οᾶεεβ Υἑαίρoς, δῆΥδᾶε ιᾶ ᾶβῤῥοῖ ᾶεεᾶΥόο οόα δᾶῆᾶῤῥοῦ ᾶῆ÷ᾶᾶ ᾶεᾶ ιᾶ δᾶῆΥ÷ῤῥοῖ οῖρ οῦοόῦ ᾶῆεῖῤῥ Υἑαίρoςο δᾶε οῖ FreeBSD:

- doc/en_US.ISO8859-1/books/handbook/mirrors/chapter.xml
- doc/en_US.ISO8859-1/books/porters-handbook/book.xml
- doc/share/xml/freebsd.ent
- src/Makefile.incl
- src/UPDATING
- src/gnu/usr.bin/groff/tmac/mdoc.local
- src/release/Makefile
- src/release/doc/en_US.ISO8859-1/share/xml/release.dsl
- src/release/doc/share/examples/Makefile.relnotesng
- src/release/doc/share/xml/release.ent
- src/share/examples/cvsup/standard-supfile
- src/sys/conf/newvers.sh
- src/sys/sys/param.h
- src/usr.sbin/pkg_install/add/main.c
- www/en/docs.xml
- www/en/cgi/ports.cgi
- ports/Tools/scripts/release/config

Ἰε οὐαίεποάεο Ἰέαιόσο εάε όά αή÷άβά ιά όεο αέιηεποάεο όσο όάεάοόάβáo όόεάιπο ὃη Ὑῶε αῶβόσο ίά ὃηίοαήιιόόιγί
 όόci Ὑά Ἰέαιόс (όόηι έηηιυ όό Ἰέαιόсо) εάε ίά αῶάηαήαάόόιγί εάόἸέεcά (όόιόό άγί έηιηγό stable εάε current):

- `src/release/doc/en_US.ISO8859-1/relnotes/common/new.xml`
- `src/release/doc/en_US.ISO8859-1/errata/article.xml`

Ç áòáññĩāP **sysinstall** ðñÝðáē áðßòçò íá áíçíáññēāß íā ôĩĩ òúòòú áñēēìù òùĩ ports éáē ôĩ ÷ þñĩ ôĩō āßóēĩō ðĩō áðáēòāßóáē áēá ôçĩ ÓōēēĩāP òùĩ Ports. ÁōōÝō íē ðēçñĩñĩñßāð òðŨñ÷ĩōĩ ôôĩ āñ÷āßĩ
src/release/sysinstall/dist.c.

Άσπυ ιεῖεεεεεεεεεε ε δνιιαιεεεεεεε εδε ιΥάδ αδΒοεεεε Υεεεεεε, δνΥδεε ιά αιεεεεεεεεεε ιεεεεεΥ αη÷αΒ εεε ιά αιεεεεεεεεεε οιι εεεεε εε ε ε ιΥά Υεεεεε εεε FreeBSD.

- `www/en/includes.xsl`
- `www/en/includes.xml`
- `www/es/includes.xml`
- `www/en/releases/*`
- `src/share/misc/bsd-family-tree`

2.2.3 Äçìéĩõñãßá ôùí Âôéêâôþí ôçò êäïóçò

1/40áí ç ôãëëêP Ýêäiöç åßiáé Ýôieìç, ç ðãñáéÜòù áíôieìP èá äçieiõñãPóáé ôçí åôéêÝóá RELENG_4_8_0_RELEASE.

```
/usr/src# cvs rtag -rRELENG_4_8 RELENG_4_8_0_RELEASE src
```

RELEASE_4_8_0 óóá éáóÜëëçä äÝíóñá ðçāāβíø ēpāëéá.

ΙαάεεΥδ οινΥδ, ιδῖαβ ίά ÷ ααεάοαβ ίά αβῖοῖ εὔδῖεαδ αεεάαΥδ οαεάαδαβ αόεαῖῖ *ιαδῖ* ογῖ οῖδῖεΥδ ογος οῖ αόεεαοῖ. Ἀαῖεῖῖ, ααῖ αβῖαε αῖοεῖῖ ίά αβῖαε εὔοε οΥοῖῖ αοῖῖ οῖ CVS αδεονΥδαε ίά ιααεεῖῖῖαε εὔδῖεῖδ οεο αόεεΥδαο ίά αῖοῖεΥδ ὑδῖο `cvs tag -d tagname filename`. Ἀβῖαε δῖεῖ ογῖαῖοεῖῖ ὑδῖο αδῖοῖ ῖε αεεάαΥδ ογος οαεάαδαβαδ αόεαῖῖδ ίά ογῖαεῖῖῖ ίά οεο οῖοῖοΥδ αόεεΥδαο αεα ογῖ οαεαεῖῖεΥῖγ ῖεαῖος. Ἰε αδβοςῖαδ αεαῖοαεο οῖο FreeBSD δῖνΥδαε ίά αβῖαε δῖῖοα αῖεῖῖ ίά αῖαδαῖα ÷ εῖῖῖ. ΟῖδεεΥδ αεεάαΥδ οοῖ δῖαεῖῖεῖῖ οῖο ιγ ÷ αῖεεῖῖ οῖῖ αεαῖοαῖῖ ααῖ αδεονΥδῖῖαε.

3 ðàáãëþôôéóç ôçò ëäïóçò

Ιε "aeauaaeo" oio FreeBSD ioiniia ia iaadaaeuooeooiia adu ioieiaaBpiao Y ÷ ae Yia o ÷ aeaeU anPaiin ic ÷ Uicia eae
 dnuoaaoc ooi repository oio dcaabio epaeaa. (4eie Y ÷ ioi aooP oc aioiaouocoa, aoiy danY ÷ ioia dnuoaaoc iYou
 alpioio CVS! AaBoa oi Aa ÷ aenbaei oio FreeBSD aea daneaouoanaa eadonYnaea.) C iuic aeaeep adabococ abiaa
 ia odu ÷ ae oiooPneic ooi ddnPia oao aea oci ooeaop vn(4). (Ooi -CURRENT, aooP c ooeaop Y ÷ ae
 afoeaaaooaaba adu oci rY a ooeaop aboeio aaoeoiYio oa iBic md(4). Ai c ooeaop aai abiaa aioiaouuYic ooi
 ddnPia oao, ouoa i eaoUeeceio iacaud ea oionueab adouiaoa uoa aeoeaeoaa c afoieP vnconfig(8) eaoU oc
 aeUnea ea oc oUocd aioiaaoba oio iYio aeebicocd. 4ea oa anaaba oio ÷ naeUaioae aea ia iaadaaeuooBaoa iea
 Yeaoc abiaa aeaeYoeia oa iioP dcaabio epaeaa ooi eaoUeia src/release. AooU oa anaaba Y ÷ ioi uo oeiou ia
 danY ÷ ioi uoe ÷ naeUaioae aea ia ÷ obaioae ie aeauaaeo oio FreeBSD ia Yia oiaop eae oaeaeeneiYi onou. Iea
 dePncd Yeaoc ioinaa ia iaadaaeuooeooa ÷ nceioiepioa aooU oa anaaba ia iea eae iui afoieP,
 oio daneaiaaia Yicd eae oc aeleioaba adu ISO an ÷ abio eaoUeecei aea ia eaa oa CDROM, ie aeoeYoaad
 aeebicocd, eaeb eae i eaoUeeceio aaeaoUoaoocd iYou FTP. AooP c afoieP abiaa ooeep c make release.

3.1 Ç áíôïëþ make release

Ἄέα ἰά ἱὰόἀα̃εὐὸδβóââ ãðéô÷-ò íέα Ῥέαιός, ὄñÝðáε δñρþá ἰά õðŨñ÷-íõí ôá éáoÜëççéá áñ÷-åßá ἰÝóá óõίῖ éáoUειῗῗ
/usr/obj. Ìðññáβóâ ἰά ôá æçìérõññáβóââ åßâ ἰá ôçí αἰóίεÞ make world Þ aðēŨ make buildworld. Ἀέα ἰά

ðáðý÷-áé áðßóçð ç ìáðááëðððéóç òçð Ýêáîóçð ðñÝðáé íá äðáððá ðéð éáðÛëëçéäð ðéíÝð éáé óá èÛðíéäð ìáðááëçðÝð:

- CHROOTDIR - Ì éáðÛëíáðð ðîõ èá ÷ ñçóéíðíéçéäß óáí ðáñéáÛëëí chroot áéá üëç òçí ìáðááëðððéóç òçð Ýêáîóçð.
- BUILDNAME - Õî üñíá òçð Ýêáîóçð ðîõ èá ìáðááëüðððáððá.
- CVSROOT - Ì éáðÛëíáðð óðñí ìðíßí áñßóéáðáé òí CVS repository.
- RELEASETAG - Ç áðééÝðá CVS ðîõ áíóéóðíé÷-áß óóçí Ýêáîóç òçí ìðíßá èÝéäðá íá ìáðááëüðððáððá.

Áí ááí Ý÷-áðá ðáç ðñüóááóç óá èÛðíéí ðíðéëü CVS repository ìá òñí èðáééá ðîõ FreeBSD, ìðíáððá ðÛíóá íá òðéÛíáððá òí áéëü óáð ðíðéëü CVS mirror ìá òí CVSup (http://www.FreeBSD.org/doc/en_US.ISO8859-1/books/handbook/synching.html#CVSUP). ÕðÛñ÷-áé Ýíá supfile, óðí áñ÷-áßí /usr/share/examples/cvsup/cvs-supfile, òí ìðíßí ìðíáððá íá ÷ ñçóéíðíéçéäðáððá áéá íá áíðéáñÛððáððá òí CVS repository ðîõ FreeBSD óðí áéëü óáð ðíðéëü mirror.

Áí ðáñáéáßðáððá òçí áðééÝðá RELEASETAG, ðüðá èá ìáðááëüðððéóðáß íéá ðëðñçð Ýêáîóç áðü òçí èíñðð ðîõ HEAD (áç. ðîõ -CURRENT) èíññí. Ìé áêüüóáéð ðîõ òðéÛ÷-ñíðáé áðü áððüí òñí èíññí, óðíðëüð áíáðÝññíðáé óáí “-CURRENT snapshots”.

ÕðÛñ÷-íðí éáé ðíééÝð Ûëëáð ìáðááëçðÝð ðîõ ìðíñíí íá ÷ ñçóéíðíéçéçéíí áéá íá ðáñáíáðñíðíéçéäðáððá òçí Ýêáîóç óáð. Ìé ðéí ðíééÝð áðü áððÝð ðéð ìáðááëçðÝð ðáñéáñÛñíðáé óóçí èíñðð ðîõ áñ÷-áßíð src/release/Makefile. Ç áêñéáðð áíðíð ðîõ ÷ ñçóéíðíéçéçéä áéá íá òðéá÷-ðáß ç áðßóçí Ýêáîóç 4.7 ðîõ FreeBSD (x86 ðéáððüñíá) ððáí:

```
make release CHROOTDIR=/local3/release \
    BUILDNAME=4.7-RELEASE \
    CVSROOT=/host/cvs/usr/home/ncvs \
    RELEASETAG=RELENG_4_7_0_RELEASE
```

Õí Makefile ðîõ ÷ ñçóéíðíéçéäðáé áéá íá ìáðááëüðððáíðáé ìé áêüüóáéð ìðíáß íá ÷ ùñéóðáß óá áñéáðÛ ìá÷-ùñéóðÛ ìáðáíý ðîõð áðíáðá.

- Äçíéíðñáß áñüð éáéáñíý ðáñéáÛëëíððð óá íéá ìá÷-ùñéóðð éáñáñ÷-ßá éáðáëüüí ìá òçí áíðíðð “make installworld”.
- Áíáñüáð áðü òí CVS ìéáð éáéñíýñéáð Ýêáîóçð ðîõ ðçááßíð èðáééá ðîõ óððððíáððð, òçð ðáèíçññüóçð éáé òñí ports ìÝóá óóçí éáñáñ÷-ßá éáðáëüüí ìáðááëðððéóçð òçð Ýêáîóçð.
- Ñðéíðáéð òñí áñ÷-áßí óðñí éáðÛëíá /etc éáé /dev ìÝóá óðí ðáñéáÛëëí chroot.
- ÁéðÝéáóç òçð áíðíðð chroot ìÝóá óóçí éáñáñ÷-ßá éáðáëüüí ðîõ áðíéíÛóðçéá, áéá íá ìçí ìðíáß òí áñüðáñéëü ðáñéáÛëëí íá áðçñáÛóáé òç ìáðááëðððéóç òçð Ýêáîóçð.
- ÁéðÝéáóç òçð áíðíðð make world ìÝóá óðí ðáñéáÛëëí chroot.
- Ìáðááëðððéóç òñí áéðáéÝóéíð ðîõ áßíáé ó÷-áðééÛ ìá òí óýóóçíá Kerberos.
- Ìáðááëðððéóç ðîõ ððñðíá GENERIC.
- Äçíéíðñáß áñüð ðáéééíý éáðáëüüíð óðñí ìðíßí èá ìáðááëüðððéóðííí éáé èá áðíèçéáððéííí ìé áéðáéÝóéíð ìñðÝð òñí ðáéééðí ðáéÝðð.
- Ìáðááëðððéóç éáé ááéáðÛóðáóç òñí áñááéáßíð ðîõ ÷ ñáéÛáíðáé áéá òçí ðñíáðíéíáððá òçð Ýêáîóçð éáé òç ìáðáðñíðð òçð ðáèíçññüóçð áðü òñí ðçááßíð èðáééá (SGML) óá html éáé áñ÷-áßá éáéíÝñð ðîõ èá óðñíáñýíðí òçí Ýêáîóçð.
- Ìáðáðñíðð éáé ááéáðÛóðáóç òçð ðáèíçññüóçð (áá÷-áéñßáéá ÷ ñððóç, áéóáñüáééÛ éáßíáíá, óçíáéðáéð Ýêáîóçð, èßðáð óðíááðððçðáðð ðéééíý, èèð.)

- ĩāóāāēpôôéoc òuĩ “òõĩðéáõĩŸĩũĩ” (crunched) āēôāēŸóēĩũĩ ðĩō éā ÷ ñçóēĩĩðĩēçēĩŸĩ óôéô āéóēŸôôāô āāēáôŨóóáocò.
- Āçĩēĩōñābā òuĩ ðāēŸôũĩ ocò āāēáôŨóóáocò éāē òuĩ ðāēŸôũĩ ðçāābĩō ēpāēēā.
- Āçĩēĩōñābā òuĩ ĩŸóũĩ āēēbĩçocò éāē ocò āéóēŸôôāô “fixit”.
- Āçĩēĩōñābā ocò éāñāñ÷bāô éāóāēüũĩ āēā ocĩ āāēáôŨóóáoc ïŸóũ FTP.
- (ðñĩíēñāôēēŨ) Āçĩēĩōñābā òuĩ ISO āñ÷ābũĩ āēā ĩŸóā CDROM/DVD media.

Āēā ðāñéóóũôāñāô ðēçñĩōĩñbāô ó÷āôēēŨ ĩā ocĩ āēāāēēáóbā āçĩēĩōñābāô ĩēāô Ÿēāĩocò, āābôā ocĩ óāēbāā ôāēĩçñbũocò release(7).

3.2 ĩāóāāēpôôéoc òuĩ XFree86

Ōĩ āñāóēēũ ðāñēāŨēēĩ **XFree86** ābĩāē Ÿĩā ocĩāĩóēēũ ēñĩŨôē ēŨēā Ÿēāĩocò āēā ðĩēēĩŸô ÷ ñpôóāô ðĩō ēŸēĩōĩ òĩ FreeBSD āēā óóāēĩŸô āñāáóbāô. ðñēĩ ocĩ Ÿēāĩoc 4.6-RELEASE òĩō FreeBSD, ĩē āðbóçĩāô āēüüóāēô òĩō FreeBSD ÷ ñçóēĩĩðĩēĩŸóāĩ ocĩ Ÿēāĩoc 3.x òuĩ **XFree86**. Ĩ ðēĩ āŸēĩēĩô ðñũðĩô ĩā ĩāóāāēũôôbôāôā āôôŸô ôéô āēüüóāēô ābĩāē ĩā ÷ ñçóēĩĩðĩēĩŸóāĩ òĩ ðñũāñāĩā `src/release/scripts/X11/build_x.sh`. Áôôũ òĩ ðñũāñāĩā āðāēôāb ĩā ābĩāē pāç ocçĩŸĩā óôĩ óŸóçĩŨ óáô òũōĩ òĩ ðāñēāŨēēĩ XFree86 üōĩ éāē ç āēpôóā Tcl/Tk. ĩāôŨ ocĩ ĩāóāāēpôôéoc òuĩ éāôŨēēçēũ X servers, òĩ ðñũāñāĩā éā ðāēāôŨñāē üēā óā āñ÷ābā óā óôēēĩāŸô āñ÷ābũĩ ðĩō ðāñēĩŸĩāē ĩā āñāē òĩ `sysinstall(8)` ĩŸóā óôĩ ēāôŨēēĩā `XF86336` óôĩ ĩŸóĩ āāēáôŨóóáocò.

ĩāēēĩpĩóáô ĩā ocĩ Ÿēāĩoc 4.6-RELEASE òĩō FreeBSD, òĩ `sysinstall(8)` āāēāēéóôŨ ocĩ Ÿēāĩoc 4.x òuĩ XFree86, óāĩ ēāñĩēēŨ ðāēŸóā. ÁôôŨ ĩðĩñāb ĩā ābĩāē ābôā óā ðāēŸóā ðĩō āçĩēĩŸñāçôā òĩ cluster òuĩ ports p ĩðĩēāāðĩôā Ũēēā ðāēŸóā ðĩō Ÿ÷ĩōĩ āçĩēĩōñāçēāb āðũ Ÿĩā ports tree ĩā ocĩ ēāôŨēēçç āôēēŸóā.

Ōçĩābũoc: Ābĩāē ðĩēŸ ocĩāĩóēēũ ĩā áóāēñŸóāôā āðũ òĩ āñ÷ābĩ `/etc/make.conf` ĩðĩēāóāpðĩôā òĩðēēŸô ñôēĩbôāēô Ÿ÷āôā ēŨĩāē. Āēā ðāñŨāāēāĩā, āāĩ ābĩāē ēāēp ēāŸā ĩā āēāĩŸĩāôā āēôāēŸóēĩā ðĩō Ÿ÷ĩōĩ ĩāóāāēũôôéóôāb óā ēŨðĩēĩ óôāēāēñēĩŸĩĩ óŸóçĩā ĩā ĩñēóĩŸĩç ocĩ óēĩp ocò ĩāóāāēçôpô `CPUTYPE` āēā āāēôéóôĩðĩbçocò òuĩ āēôāēŸóēĩũĩ āēā ēŨðĩēĩ óôāēāēñēĩŸĩĩ āðāĩāñāáóôp.

3.3 ðñĩāñŨĩĩāóā Ōñbôũĩ (“ports”)

Ç Óôēēĩāp òuĩ Ports òĩō FreeBSD (<http://www.FreeBSD.org/ports>) ābĩāē ĩēā óôēēĩāp ĩā ðāñéóóũôāñā āðũ 24,000 ðñĩāñŨĩĩāóā āðũ òñbôĩôô, ðĩō ābĩāē āēāēŸóēĩā āēā FreeBSD. ĩē ĩŨāā Āēā÷ābñēocò òuĩ Ports `<portmgr@FreeBSD.org>` ābĩāē ôðāŸēðĩēē āēā ocĩ óôĩôpñçocò āĩũô āŸĩôñĩô āðũ ðçāābĩ ēpāēēā āēā óā ports, ðĩō ĩðĩñāb ĩā ÷ ñçóēĩĩðĩēçēāb āēā ĩā āçĩēĩōñāçēĩŸĩĩ óā ðāēŸóā ĩā óā ðñĩāñŨĩĩāóā ðĩō óôñāŸĩōĩ ôéô āðbóçĩāô āēüüóāēô òĩō FreeBSD.

Ç āēāāēēāóbā óôĩôpñçocò ocò óôēēĩāp òuĩ ports ābĩāē ēŨôē ðĩō āāĩ ĩðĩñĩŸĩā ĩā ēāēŸôĩðĩā āāp. ĩā ĩā÷ũñēóôũ Ũñēñĩ, ĩā ôbôēĩ Ç ĨñāŨtúoc ēāĩocò òuĩ ðāēŸôũĩ ĒĩāēóĩēēŸĩ āðũ Ōñbôĩôô (`./releng-packages/article.html`), ēāēŸôāē āôôũ òĩ ēŸĩā.

3.4 Āñ÷ābā ISO ocò ēāĩocò

ĩāēēĩpĩóáô ĩā ocĩ Ÿēāĩoc 4.4 òĩō FreeBSD, ç ĩŨāā ĀĩŨðôðĩçô òĩō FreeBSD āðĩôŨóēóā ĩā āēāĩŸĩāē ēāē óā ôŸóóāñā ISO āñ÷ābā ðĩō ðñpôā ðĩōēĩŸóāĩ ĩē āóāēñābāô *BSDi/Wind River Systems/FreeBSD Mall* óôéô “āðbóçĩāô” āēāmŸô CDROM ðĩō Ÿēāĩāĩ. ēŨēā Ÿĩā āðũ óā ôŸóóāñā ISO āñ÷ābā ðñŸðāē ĩā ðāñēŸ÷āē Ÿĩā āñ÷ābĩ `README.TXT` ðĩō

ðǻñéǻñŨóǻé óǻ ðǻñéǻ ÷ ùǻǻǻ òĩō ǻßóèĩō, êé Ýǻǻ ǻñ ÷ ǻßĩ CDROM.INF ðĩō ðǻñéÝ ÷ ǻé ïǻóǻ-ðéçñĩōĩñßǻð ǻéǻ íǻ ïðĩñǻß òĩ ðñüǻñǻǻǻ sysinstall(8) íǻ ǻéÝǻǻǻ éǻé íǻ ÷ ñçóéĩðĩéßóǻé ǻóòü òĩ ǻßóèĩ, éǻèð òé Ýǻǻ ǻñ ÷ ǻßĩ filename.txt ðĩō ðǻñÝ ÷ ǻé íéǻ èßóóǻ ǻñ ÷ ǻßüĩ òĩō CDROM. Áóðß ç èßóóǻ ïðĩñǻß íǻ ǻçĩéĩñǻçéǻß ðĩéý ǻðéŨ, ùð ǻĩßð:

```
/stage/cdrom# find . -type f | sed -e 's/^\\.\\.\\/' | sort > filename.txt
```

Íé óðǻéǻèñéĩÝǻð ǻðǻéóßóǻéð ǻéǻ èŨèǻ Ýǻǻ ǻðü ǻóòŨ óǻ CD ðǻñéǻñŨĩĩóǻé ðǻñǻéŨòü:

3.4.1 ǻßóèĩō 1

Í ðñðòĩð ǻßóèĩð ǻßǻéé ó ÷ ǻǻüĩ ǻðĩééǻéóóééŨ ǻðĩðÝéǻóĩǻ òçð ǻĩóĩéßð make release. Íé ïüǻð ǻééǻǻÝð ðĩō ðñÝðǻé íǻ ǻßĩĩĩ òóĩĩ éǻóŨéĩǻĩ disc1 ǻßǻéé ç ðñĩóèßéç òĩō éǻóŨéĩǻĩò tools, òüĩ **XFree86**, éǻé üóĩ òĩ ǻóĩǻóüĩ ðǻñéóóüðǻñüĩ ðǻéÝòüĩ ïðĩñĩý íǻ ÷ ùñÝóĩĩ òóĩ ǻßóèĩ. Í éǻóŨéĩǻĩò tools ðǻñéÝ ÷ ǻé ǻñǻǻéǻǻá ðĩō ǻðéòñÝðĩĩ óǻ ÷ ñßóóǻð Ũéèüĩ éǻéòĩñǻéèßĩ óóóòçĩŨòüĩ íǻ òóéŨĩĩĩ òéð ǻéóéÝóóǻð ǻéèßĩçóçð. Áóòüð ï ðñðòĩð ǻßóèĩð ðñÝðǻé íǻ òóéŨ ÷ íǻóǻé bootable Ýóóé ðóóǻ íǻ ïðĩñĩý íé ÷ ñßóóǻð òüĩ ïüðÝñüĩ òðĩéĩǻéóóßĩ íǻ ǻðĩòǻýǻĩ òĩ óóŨǻéĩ ǻçĩéĩñǻßǻð òüĩ ǻéóéǻóóßĩ ǻéèßĩçóçð.

ǻĩ íéǻ ǻéǻóĩñǻðéèß Ýéǻĩóç òüĩ XFree86 éǻ ǻéǻĩÝǻóǻé ïǻ òçĩ Ýéǻĩóç ǻóòß, ðñÝðǻé íǻ ǻçĩǻñüèǻß òĩ ðñüǻñǻǻǻ sysinstall(8) ǻéǻ òçĩ íÝǻ èÝóç éǻé íé ïǻçǻßǻð ǻǻéǻóŨóóǻóçð. Í ó ÷ ǻðéèüð èßǻééǻð òðŨñ ÷ ǻé óóĩĩ éǻóŨéĩǻĩ src/release/sysinstall òóĩĩ -STABLE èĩñü ð óóĩĩ éǻóŨéĩǻĩ src/usr.sbin/sysinstall òóĩĩ -CURRENT èĩñü. ÓðǻéǻèñéĩÝǻǻ, óǻ ǻñ ÷ ǻßǻ dist.c, menus.c, éǻé config.c éǻ ÷ ñǻéǻóóǻß íǻ ǻçĩǻñüèĩý.

3.4.2 ǻßóèĩō 2

Í ǻǻýðǻñĩð ǻßóèĩð ǻßǻéé ǻðßóçð ǻðĩðÝéǻóĩǻ òçð ǻĩóĩéßð make release éǻóŨ Ýǻǻ ïǻǻŨéĩ ïÝñĩð. Áóòüð ï ǻßóèĩð ðǻñéÝ ÷ ǻé Ýǻǻ “live filesystem” ðĩō ïðĩñǻß íǻ ÷ ñçóéĩĩðĩéçéǻß ǻðü òĩ sysinstall(8) ǻéǻ íǻ ǻĩǻóǻóóĩý ðñĩǻéßĩǻóǻ óǻ íéǻ ǻǻéǻóŨóóǻóç òĩō FreeBSD. Èé ǻóòüð ï ǻßóèĩð ðñÝðǻé íǻ ǻßǻéé bootable. Èǻ ðñÝðǻé ǻðßóçð íǻ ðǻñéÝ ÷ ǻé Ýǻǻ óóĩðéǻóĩÝĩ ǻĩóßǻñǻóĩ òĩō CVS repository óóĩĩ éǻóŨéĩǻĩ CVSROOT éǻé ǻǻǻǻǻóǻ ǻðü ǻðĩñééŨ ðñĩǻñŨĩǻóǻ óóĩĩ éǻóŨéĩǻĩ commerce.

3.4.3 ǻßóèĩé 3 éǻé 4

Íé òðüéĩéðĩé ǻòĩ ǻßóèĩé ðǻñéÝ ÷ ïĩĩ ǻðéðñüóéǻóǻ ðǻéÝóǻ éĩǻéóĩééý ǻéǻ òĩ FreeBSD. Óǻ ðǻéÝóǻ éǻ ðñÝðǻé íǻ ǻßǻé ñǻǻĩðĩéçĩÝǻǻ, Ýóóé ðóóǻ èŨèǻ ðǻéÝòĩ íǻ ǻßǻéé óóĩĩ ðǻéĩ ǻßóèĩ ïǻ üéǻ óǻ ðǻéÝóǻ ǻðü óǻ ïðĩßǻ ǻĩǻñðŨóǻé ǻéǻ íǻ ǻǻéǻóóóǻéǻ éǻé íǻ òñÝĩǻé. ðǻñéóóüðǻñǻð ðéçñĩōĩñßǻð ǻéǻ òçĩ ǻçĩéĩñǻßǻ ǻóòßĩ òüĩ ǻßóèüĩ ǻĩǻóÝñĩĩóǻé óóĩĩ Ũñèñĩ Ç ÎñǻŨñóç éǻĩóçð òüĩ ðǻéÝòüĩ Éĩǻéóĩééý ǻðü Òñßòĩòð (../releng-packages/article.html).

4 ǻéǻĩñß òüĩ Áêüüóǻùí

4.1 ǻĩððçñǻðçðÝð FTP

¼óǻĩ ç Ýéǻĩóç ǻßǻéé Ýóĩéĩç, Ý ÷ ǻé ǻĩééĩǻóóǻß ǻéóǻĩðð, éǻé Ý ÷ ǻé ðǻéǻóǻñéóóǻß ǻéǻ ǻéǻĩñß, ï éýñéĩð FTP ǻĩððçñǻðçðð ðñÝðǻé íǻ ǻçĩǻñüèǻß. Íé ǻðßóçĩé ǻĩððçñǻðçðÝð FTP òĩō FreeBSD ǻßǻéé üéé mirrors ǻĩüð éýñéĩð ǻĩððçñǻðçðß óóĩĩ ïðĩßĩ Ý ÷ ïĩĩ ðñüóǻǻóç ïüĩ Ũééé FTP ǻĩððçñǻðçðÝð. Áóòüð ï ǻĩððçñǻðçðð ǻßǻéé ǻĩüóóüð ùð ftp-master. ¼óǻĩ ç Ýéǻĩóç ǻßǻéé Ýóĩéĩç, ðñÝðǻé íǻ ǻçĩǻñüèĩý óǻ ðǻñǻéŨòü ǻñ ÷ ǻßǻ óóĩĩ ftp-master:

[/pub/FreeBSD/index.html](#)

λέα ἀδῆP web οἰαῖβᾶᾶ ὄϊο ὀᾶῖῖÉY ÷ ᾶέ ᾶᾶβῆοᾶᾶ οᾶ ᾶέUοῖῖῖῖῖᾶ οῖαῖᾶῖᾶῖᾶῖᾶ FTP ῆᾶᾶᾶῖᾶῖᾶᾶ ᾶῆᾶ οῖαῖ ὀῖῖY ÷ ῖᾶᾶᾶ Yῆᾶῖᾶᾶ ὀῖᾶ FreeBSD.

```
/pub/FreeBSD/releases/arch/X.Y-RELEASE/
```

I éadóUeräno ádu öni rðirBi ððrñryí íá äBfröi äæéáoóóÜöáoéò iYóu FTP, üðuò öni Y÷æ ðñiäoiéiÜöáoé ç áföieP make release.

/pub/FreeBSD/ports/arch/packages/packages-X.Y-release/

¼ëá ôá ðñĩĩãôããëùôêéóìÝíá ðáéÝôá ãéá ôçì ôñÝ÷ĩõóá Ýëäĩõç.

```
/pub/FreeBSD/releases/arch/x.Y-RELEASE/tools
```

Îéá óõïâîëëêÐ óõïôùîâõóç ãéá ôîí êáôÛëîäí .../.../.../tools.

/pub/FreeBSD/releases/arch/X.Y-RELEASE/packages

```

λέά όοίâîëêêP όοίôùîâóóç äéá ôîí êáoÜëîäî .../.../.../ports/i386/packages-X.Y-release.

```

```
/pub/FreeBSD/releases/arch/ISO-IMAGES/x.y/x.y-*.iso
```

Ôá áñ÷åßá ISO.

Άέά άάήέόούόάήάό άέçñĩōĩñßå ò÷âôéÛ ìà ôçĩ ìñãÛĩúôç òùì mirror áéáñĩðò FTP ôĩò FreeBSD, άάñáéáēρ ááßôå ôĩ Ûñēñĩ ÖôéÛ÷ĩĩôåò Ýía FreeBSD mirror (../hubs/).

[illegible]

4.2 ÀáæéêÞ ÁíáðáñáãùãÞ ôùí CD-ROM

Έὰ όόιðεçñùèαß όύίôîä: ÓôîâröëÝò äéå ôçí äóïóîrēP ôùì ISO áñ÷-âßùì ôîrō FreeBSD óá êÜðîérí ðîrō îðîñâß íá êÛíäé íäæéêP áíáðánáàüâP, éäé îÝÔñä äēÝã÷îð ðîrō ðîrōîçôóáoð ðîrō îðîñîýíí íá ðänèñýíí.

5 Åđăêôáóéìüôçôá

[illegible]

5.1 Äçĭēĭōñāßá ÐñĭóáñĭōĭŸĭñĭ Āéóēāōōþĭ Āēēßĭçóçð.

ÐĭēēŸð āēēāóáóōŨóāēð Ÿ÷ĭōĭ ðĭēŸðēĭēāð áðāēðþóāēð ðĭō ĭðĭñāß ĭā òç óāēñŨ òĭōð ĭá áðāēðĭŸĭ òçĭ ðñĭóēþēç ðñāēóóóðññĭ ĭāçāþĭ þ āñāāēāßñĭ ÷ñþóçç òóēð āēóēŸððāð āāēāðŨóóáçðð. Ĩ “ĭðāēŨēēēĭð” òññðĭð ĭá òĭ ēŨĭāðā áððñ āßĭāē ĭá ēŨĭāðā òēð āēēāŸð óāð òñĭ ēāðŨēĭāĭ ðĭō Ÿ÷āē āðĭēĭŨóāē ĭāðŨ òĭ òŸēĭð òçð ç āēāāēēāóßá make release:

- ÐāñŨóðā òá patches óāð þ ðñĭóēŸððā òá āðēðēŸĭñ āñ÷āßā ĭŸóá òñĭ ēāðŨēĭāĭ chroot òçð Ÿēāĭóçð.
- `rm ${CHROOTDIR}/usr/obj/usr/src/release/release.[59]`
- ĭāðāāēñððóðā ðŨēē òĭ sysinstall(8), òĭ ðñþĭá, þ ũðĭēā Ũēēā ðññāñŨñāðā Ÿ÷ĭōĭ āðçñāāóðāß áðñ òēð āēēāŸð óāð.
- `chroot ${CHROOTDIR} ./mk floppies`

ĭē ĭŸāð āēóēŸððāð āāēāðŨóóáçðð ēā äçĭēĭōñāçēĭŸĭ òñĭ ēāðŨēĭāĭ \${CHROOTDIR}/R/stage/floppies.

ĀĭāēēāēðēēŨ, ĭðĭñāßðā ĭá ÷ñçóēĭðĭēþóāðā òĭ make target boot.flp, þ ĭðĭñāßðā ĭá òñŸĭāðā áðāðēāßāð òĭ script ðĭō äçĭēĭōñāßāß òá òðððþĭāðā āñ÷āßñĭ src/release/scripts/doFS.sh.

ĭðĭñāßðā āðßóçð ĭá ēāñĭßóðāð þóðā āēēŸð óāð āēēāŸð ĭá ðñāāóðĭŸĭ ĭā ĭññðþ patch òçĭ Ÿēāĭóç ũðñð ēā òðēŨ÷ĭāðāē, āßñĭðāð òēĭþ òçĭ ĭāðāāēçðþ LOCAL_PATCH ũðāĭ òñŸĭāðā òçĭ āĭðĭēþ make release.

5.2 Ðñĭāñāĭāðßæĭĭóāð òĭ sysinstall

Ōĭ āñāāēāßĭ āāēāðŨóóáçðð ēāē ñŸēĭóçðð òĭō FreeBSD, òĭ sysinstall(8), ĭðĭñāß ĭá ðñĭāñāĭāðēóðāß āēā ĭá ēŨĭāē ðēĭ āŸēĭēāð òēð áððññāðĭðĭēçĭŸĭāð āāēāðáóðŨóāēð òá ðĭēēŨ ĭç÷āĭþĭāðā. Áððñ òĭ ÷āñāēðçñēóðēēñ òĭō ðññāñŨñāðĭð ĭðĭñāß ĭá ÷ñçóēĭðĭēçēāß òá òñĭāðáðñĭ ĭā òĭ PXE[13] òçð Intel āēā ĭá ĭāēēĭþóāē ç āāēāðŨóóáçðð áðñ òĭ āßēððĭ, þ òá òñĭāðáðñĭ ĭā ðñĭóáñĭōĭŸĭāð āēóēŸððāð āēēßĭçóçðð ēē Ÿĭā sysinstall script. ĭá ðāñŨāāēāĭā áðñ òŸðĭēĭ sysinstall script ĭðĭñāßðā ĭá āñāßðā òðĭ āñ÷āßñĭ src/release/sysinstall/install.cfg.

6 ĭāēþĭāðā ðĭō Ðþñāĭā áðñ òçĭ êäĭóç 4.4 òĭō FreeBSD

Ç āēāāēēāóßá āðĭēĭāðáð òçð Ÿēāĭóçð 4.4 òĭō FreeBSD ĭāēßĭçóçā āðßóçĭā òçĭ ĭç ÁðāĭŸóðĭð 2001. ĭāðŨ áðñ áððþ òçĭ çĭāññĭçĭá, ũēāð ĭē āēēāŸð òñĭ ēĭñĭñ RELENG_4 òĭō FreeBSD Ÿðñāðā ĭá Ÿ÷ĭōĭ Ÿāēñēóç áðñ òçĭ ĨŨāā ĨñāŨñóçð òñĭ Āēäüóäñĭ <re@FreeBSD.org>. Ç ðñþçç āĭēēĭāóðēēþ Ÿēāĭóç āēā òçĭ āñ÷ēðāēðĭēēþ x86 Ÿāēĭā āēāēŸóēĭç òóēð 16 ÁðāĭŸóðĭð, ēē āēĭēĭðēþēçēā áðñ 4 áēñĭā āĭēēĭāóðēēŸð āēäñóāēð ðĭō ĭāþāçóāĭ òçĭ òāēēēþ Ÿēāĭóç òóēð 18 òĭō ÓāððŸĭāñç. Ĩ òðāŸēðñð áóðŨēāēāð Ÿðāēĭā òçĭāĭðēēñ ññēĭ ēāðŨ òçĭ āēŨñēāēā òçð òāēāððáßāð āāāñŨāāð ēāēþð ēŨðĭēā ðñĭāēþĭāðā áóðŨēāēāð āñŸēçēāĭ òá ðñĭçāĭŸĭāĭāð, āĭēēĭāóðēēŸð āēäñóāēð. ÓññēēēŨ, ðŨĭñ áðñ 500 email òðŨēçēāĭ òçĭ ĨŨāā ĨñāŨñóçð òñĭ Āēäüóäñĭ <re@FreeBSD.org> òá āēŨóçĭā ĭēēññðññĭ áðñ Ÿĭā ĭþĭā.

Ç ēĭēĭñðçðā òñĭ ÷ñçóðþĭ ĭāð Ÿēāĭā óāðŸð ũðē ç áóðŨēāēā ēāē ç óðāēāññðçðā ĭēāð Ÿēāĭóçð āāĭ ēŨ ðñāðā ĭá ēððēŨæāðāē āēā ēāĭāñð āßāĭðð ðñĭēāðĭßāð þ çĭāññĭçĭáðð ðĭō Ÿ÷ĭōĭ òāēāß óāĭ òðñ÷ĭē áðñ ðñēĭ. Ōĭ FreeBSD Ÿ÷āē ĭāāāēþóāē āñāĭāðēēŨ ēāðŨ òç āēŨñēāēā òçð æððð òĭō óāĭ óŸóçĭā, ēāē ç āĭŨāēç āēā óðāēāñēĭŸĭç ðĭēðēēþ ēāē ĭñāŨñóçç āēā òçĭ äçĭēĭōñāßā ĭŸñĭ āēäñóäñĭ āßĭāē ðēŸĭñ óāĭāñþ ðñāēóóóðññĭ áðñ ðĭōŸ. Áððþ ç āĭŨāēç ēā āßĭāē áēñĭā ðēĭ çĭāĭðēēþ ēāēþð òĭ FreeBSD ēā āñ÷āßāē ĭá ĭāðāŸŸñāðāē òá ĭŸāð ðēāððññāð.

7 ìäëëïíôéeêÝò Êáôãõèýíóãéò

[illegible]

- [illegible]

8 Å ÷ á ñ é ó ô ß à ò

[illegible]

9 ÁíáöïñÝò

- [1] CVS - Concurrent Versions System <http://www.cvshome.org>
- [2] CVSup - The CVS-Optimized General Purpose Network File Distribution System
<http://www.polstra.com/projects/freeware/CVSup>
- [3] <http://bento.FreeBSD.org>
- [4] FreeBSD Ports Collection <http://www.FreeBSD.org/ports>
- [5] The libh Project <http://www.FreeBSD.org/projects/libh.html>

- [6] FreeBSD Committers
http://www.FreeBSD.org/doc/en_US.ISO8859-1/articles/contributors/staff-committers.html
- [7] FreeBSD Core-Team http://www.FreeBSD.org/doc/en_US.ISO8859-1/articles/contributors/staff-core.html
- [8] FreeBSD Handbook http://www.FreeBSD.org/doc/en_US.ISO8859-1/books/handbook
- [9] GNATS: The GNU Bug Tracking System <http://www.gnu.org/software/gnats>
- [10] FreeBSD PR Statistics <http://www.FreeBSD.org/prstats/index.html>
- [11] NetBSD Developer Documentation: Release Engineering <http://www.NetBSD.org/developers/releng/index.html>
- [12] John Baldwin's FreeBSD Release Engineering Proposal <http://people.FreeBSD.org/~jhb/docs/releng.txt>
- [13] PXE Jumpstart Guide http://www.FreeBSD.org/doc/en_US.ISO8859-1/articles/pxe/index.html
- [14] Marshall Kirk McKusick, Michael J. Karels, and Keith Bostic: *The Release Engineering of 4.3BSD*
(<http://docs.FreeBSD.org/44doc/papers/releng.html>)