Why You Should Care About kibis

Howard Frazier
IEEE 802 LMSC
Hyatt Regency, Kauai
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P1541 Draft Standard
Prefixes for Binary Multiples

- The prefixes given in Table 1 shall be used to indicate multiplication by 2^{10n}, where n = 1,2,3,4,5, or 6.

Factor	Name	Symbol	Origin	Related SI Prefix		Examples
2^{10}	kibi	Ki	kilobinary: (2^{10})	kilo: (10^3)	k	Kib = 1.024 kb
2^{20}	mebi	Mi	megabinary: $(2^{10})^2$	mega: $(10^3)^2$	M	MiB ≈ 1.0486 MB
2^{30}	gibi	Gi	gigabinary: $(2^{10})^3$	giga: $(10^3)^3$	G	Gio ≈ 1.0737 Go
2^{40}	tebi	Ti	terabinary: $(2^{10})^4$	tera: $(10^3)^4$	T	Tib ≈ 1.0995 Tb
2^{50}	pebi	Pi	petabinary: $(2^{10})^5$	peta: $(10^3)^5$	P	PiB ≈ 1.1259 PB
2^{60}	exbi	Ei	exabinary: $(2^{10})^6$	exa: $(10^3)^6$	E	Eio ≈ 1.1529 Eo

- The SI prefixes shall not be used to denote multiplication by powers of two.

P1541 Current Status

- PAR approved May 2002
- Sponsor ballot completed July 2002
  - 16 balloters - Gov/Academic/Consultant/User
  - No Producers in sponsor ballot pool
  - Unanimous approval
- Approved by RevCom September 2002
- Tabled by IEEE-SA StB until December 2002
- If P1541 is approved, all projects submitted to RevCom will be reviewed[a] for compliance

[a] other verbs could be used

IEEE-SA StB Possible Actions on P1541

- Approve as Full Use, 5 year IEEE Std

or

- Approve as Trial Use, 2 year IEEE Std
  - Any comments received during trial period would have to be addressed, and potentially re-balloted

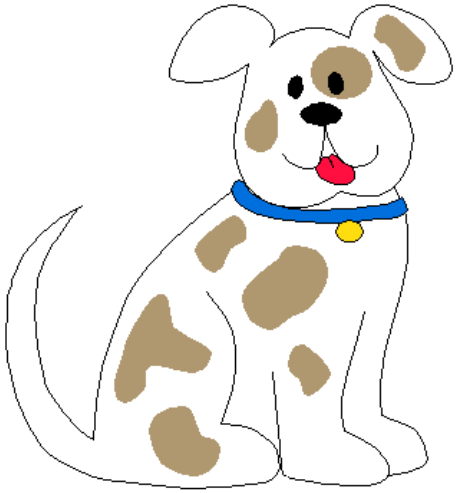
or

- Re-form sponsor ballot group and re-ballot

Questions for IEEE 802 LMSC Members

- Do you care about P1541?
- Were you aware of P1541?
- Did you have the opportunity to comment and ballot on P1541?
- Would you like to have the opportunity to comment and ballot on P1541?
- What should the IEEE-SA StB do about P1541?
  - Approve (Full Use, 5 year)
  - Approve (Trial Use, 2 year)
  - Re-form ballot group and re-ballot

What do you think of when you hear “kibi”?



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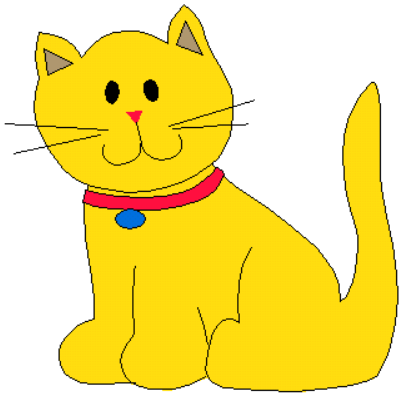

or mebi something else?

Alternatives to kibis

- Assuming that the imprecision associated with using decimal prefixes when discussing binary multiples is worth addressing, there are alternatives to the introduction of new prefixes:
  - Write the precise value in expanded form, e.g. 65 536 bytes, rather than 64 kB
  - Write the precise value in exponential form, e.g. 2^{16} bytes

Background

- P1541 was drafted and balloted by Standards Coordinating Committee (SCC) 14: Quantities, Units and Letter Symbols
- Unlike other sponsors and SCCs that draft standards, SCC14 is not listed on the “Request Form to Join an IEEE Balloting Pool”:

  http://standards.ieee.org/db/balloting/ballotform.html

- SCC14 is very diligent and very persistent about reviewing all projects for compliance with IEEE Standards for quantities, units and letter symbols. Compliance with 1541 will probably be vigorously enforced.

Background

- In *subclause 5.4.1 Balloting group*, the IEEE-SA Standards Board Operations manual says:

  The balloting group shall provide for the development of consensus by all interests significantly affected by the scope of the standard. This is achieved through a balance of such interests in the balloting group membership. Balance is defined as the avoidance of dominance by any single interest category.

  …

  Care shall be taken to ensure that all classes of interest are represented to the extent possible.

Background

- The campaign for kibis began in the IEC, which adopted IEC 60027-2, Letter symbols to be used in electrical technology, Part 2: Telecommunications and electronics, Amendment 2, 1999-01.

- ASTM/IEEE SI 10-2002, Standard for Use of the International System of Units (SI): The Modern Metric System, says the use of SI prefixes to denote multiplication by powers of two is deprecated.