RFC 7228 bis

RFC 7228 (2014) Terminology:
- constrained node network
- "Class 1", "Class 2" devices

draft-...-7228bis expands:
- set of classes offered
- range of some classes

M	Class 1, C1	~ 10 KiB	~ 100 KiB	STM32F103CB
M	Class 2, C2	~ 50 KiB	~ 250 KiB	STM32F103RC
M	Class 3, C3	~ 100 KiB	~ 500..1000 KiB	STM32F103RG
M	Class 4, C4	~ 300..1000 KiB	~ 1000..2000 KiB	"Luxury"
J	Class 10, C10	(16..)32..64..128 MiB	4..8..16 MiB	OpenWRT routers
J	Class 15, C15	0.5..1 GiB	(lots)	Raspberry PI
J	Class 16, C16	1..4 GiB	(lots)	Smartphones

Name	Type of energy limitation	Example Power Source
E0	Event energy-limited	Event-based harvesting
E1	Period energy-limited	Battery that is periodically recharged or replaced
E2	Lifetime energy-limited	Non-replaceable primary battery
E9	No direct quantitative limitations to available energy	Mains-powered

Table 6: Classes of Energy Limitation

draft-ietf-iotops-7228bis-03 revision

- finally addresses a review from Martine Sophie Lenders
- tons of editorial improvements (from Martine's review and as proposed by Med Boucadair).

Thanks to all reviewers!
Technical changes:

- more explicit about header compression in Table 12 for Section 5.3 "Classes of physical layer bit rate" [Martine]
- introduces a class “Is1” in Table 3 for Section 3.2 "Isolation Functionality" [Christian Amsüss]

Name	PHY bit rate (bit/s)	Comment	Header compression
B0	< 10	Transmission time of 150-byte frame > MSL	indispensable as part of system architecture
B1	$10 – 10^3$	Unresponsiveness if human expects reaction to sent frame (frame size > 62.5 byte)	vital
B2	$10^3 – 10^6$	Responsiveness if human expects reaction to sent frame	yields significant performance benefits
B3	$> 10^6$		yields limited performance benefits

Table 12: Classes of Physical Layer Bitrate

Name	Isolation functionality
Is0	no isolation
Is1	Boot Lock or Flash Read Lock, until next reboot
Is2	MPU (memory protection unit), at least boundary registers
Is5	MMU with Linux-style kernel/user
Is7	Virtualization-style isolation
Is8	Secure enclave isolation

Table 3: Levels of Isolation Capabilities

Plan

- WGLC
- address the copious reviews we'll get on that
- publish