Simplified Multicast Forwarding (SMF) Update

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SMF Goal Review

- Provide a basic multicast packet forwarding function
- Simple baseline (all nodes receive)
- Target native IP multi-hop forwarding
 - Both IPv4 and IPv6 design
- Support dynamic, optimized relay set algorithms (e.g., MPRs, CDS variant)
 - Experience with MPR-variants. Other CDS algorithms of interest being considered
- Internet connectivity and interoperability
- Support potential mix of "neighborhood aware" and "unaware" SMF nodes?
- "draft-ietf-manet-smf-01" was submitted since the last IETF.







	Smf vs Unicast							
		Reduction	ons in		Uni	cast network	c properties	
	forwards per LSA message	# LSA mess- ages	links per LSA		# known links	total overhead scalibility*	Robust- ness	
classical	None	None	None		All		??	
ns-mpr	Minor	Minor	Major		Most	Little	??	
mpr	Major	Minor	Major		Most	Some	??	
mdr	Major	Major	Somewhat		Fewest	Most	??	
mpr-cds	Major	Major	Somewhat		Fewest	Most	??	
*scalibility in terms of bytes **Only DR originating LSAs								

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mpr-cds	Major	Major	Somewhat		Fewest	Most	??
*scali	bility in term	s of byte	s *	*On	ly DR origin	ating LSAs	









Next Steps

- Define baseline neighborhood discovery mechanism (e.g. SMURF) and enumerate requirements specific to different relay set algorithms (and identify the proper "home" for this mechanism and it message formats)
- More exhaustive simulations of relay set algorithms & SMF in progress.
- Better address potential for mix of "aware" and "unaware" forwarding nodes
- Continue to explore and solicit input for "Gateway Considerations"
- Enumerate primitives for inputs/outputs (notional API) between the different SMF functional modules so that compatible implementations might be instantiated.