NOTATION

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Notation

$\mathcal{U}$ ≜ universe of ACL2 values

ω_t ≜ guard obligations of t ; $\omega_t \subseteq \mathcal{U}^n$
$\surd t$ ≜ $[\omega_t = \mathcal{U}^n]$ — t is guard-verified
$FV(t)$ ≜ free variables of t
} t is an ACL2 term with n free variables

$t[t_1/t_2]$ ≜ replace every occurrence of t_1 with t_2 in t, where t_1, t_2, t are translated terms without let

$[t_1 \equiv t_2]$ ≜ t_1 and t_2 are the same term

δ_f ≜ $[f(\bar{x}) = \ldots]$ — definition of f (if defined)
μ_f ≜ measure of f (if recursive) ; $\mu_f : \mathcal{U}^n \to \mathcal{U}$
$\prec_f$ ≜ well-founded relation of f (if recursive) ; $\prec_f : \mathcal{U} \times \mathcal{U} \to \mathcal{U}$
τ_f ≜ $\left[\bigwedge_{j=1}^{j=m}\left(\psi_j(\bar{x}) \Rightarrow \mu_f(\rho_{j,1}(\bar{x}), \ldots, \rho_{j,n}(\bar{x})) \prec_f \mu_f(\bar{x})\right)\right]$ — f terminates (if recursive)
ω_f ≜ guard obligations of f ; $\omega_f \subseteq \mathcal{U}^n$
$\surd f$ ≜ $[\omega_f = \mathcal{U}^n]$ — f is guard-verified
γ_f ≜ guard of f ; $\gamma_f \subseteq \mathcal{U}^n$
$[f \subseteq \mathcal{U}^n]$ ≜ f is (used as) a predicate
} f is an ACL2 function with formals $\bar{x} = x_1, \ldots, x_n$