

Name	Notation	Comment
program order	$m_1 \xrightarrow{\text{po}} m_2$	per-processor total order
dependencies	$m_1 \xrightarrow{\text{dp}} m_2$	dependencies
po-loc	$m_1 \xrightarrow{\text{po-loc}} m_2$	program order restricted to the same location
preserved program order	$m_1 \xrightarrow{\text{ppo}} m_2$	pairs maintained in program order; $\text{ppo} \subseteq \text{po}$
	$m_1 \xrightarrow{\text{ppo}_2 \setminus 1} m_2$	ppo on A_2 but not on A_1
read-from map	$w \xrightarrow{\text{rf}} r$	links a write to a read
global read-from map	$w \xrightarrow{\text{grf}} r$	rf considered global
	$w \xrightarrow{\text{grf}_2 \setminus 1} r$	rf global on A_2 but not on A_1
write serialisation	$w_1 \xrightarrow{\text{ws}} w_2$	total order on writes to the same location
from-read map	$r \xrightarrow{\text{fr}} w$	r reads from a write preceding w in $\xrightarrow{\text{ws}}$
barriers	$m_1 \xrightarrow{\text{ab}} m_2$	ordering induced by barriers
global happens-before	$m_1 \xrightarrow{\text{ghb}} m_2$	$\text{ghb} \triangleq \text{ws} \cup \text{fr} \cup \text{grf} \cup \text{ppo} \cup \text{ab}$
communication	$m_1 \xrightarrow{\text{com}} m_2$	shorthand for $m_1 (\xrightarrow{\text{rf}} \cup \xrightarrow{\text{ws}} \cup \xrightarrow{\text{fr}}) m_2$

Fig. 1. Table of relations