Erratum paper
W.M.P. van der Aalst,
Decomposing Petri Nets for Process Mining: A Generic Approach,
Distributed and Parallel Databases, 31(4):471-507, 2013.

In the published paper two requirements regarding transition labels are missing (but from the text it is clear that they are assumed right from the start).

In Definition 17 the requirement $rng(l_i) \cap rng(l_j) \subseteq A_v^u(SN)$ for $1 \leq i < j \leq n$ was not stated explicitly, i.e., subnets may only share labels through unique visible transitions. The complete definition is given below.

Definition 17 (Valid Decomposition). *Let $SN \in \mathcal{U}_{SN}$ be a system net with labeling function l. $D = \{SN^1, SN^2, \ldots, SN^n\} \subseteq \mathcal{U}_{SN}$ is a valid decomposition if and only if*
- *$SN^i = (N^i, M^i_{init}, M^i_{final})$ is a system net with $N^i = (P^i, T^i, F^i, l^i)$ for all $1 \leq i \leq n$,*
- *$l^i = l{\restriction_{T^i}}$ for all $1 \leq i \leq n$,*
- *$P^i \cap P^j = \emptyset$ for $1 \leq i < j \leq n$,*
- *$T^i \cap T^j \subseteq T_v^u(SN)$ and $rng(l_i) \cap rng(l_j) \subseteq A_v^u(SN)$ for $1 \leq i < j \leq n$, and*
- *$SN = \bigcup_{1 \leq i \leq n} SN^i$.*

$\mathcal{D}(SN)$ is the set of all valid decompositions of SN.

In Theorem 2 it was implicitly assumed that the log only uses activities also in the model: $A_v(SN) = A$. This was clear from context but not stated explicitly.

Theorem 2 (Conformance Checking Can be Decomposed). *Let $L \in \mathcal{B}(A^*)$ be an event log with $A \subseteq \mathcal{U}_A$ and let $SN \in \mathcal{U}_{SN}$ be a system net with $A_v(SN) = A$. For any valid decomposition $D = \{SN^1, SN^2, \ldots, SN^n\} \in \mathcal{D}(SN)$: L is perfectly fitting system net SN if and only if for all $1 \leq i \leq n$: $L{\restriction_{A_v(SN^i)}}$ is perfectly fitting SN^i.*

Additional minor typo's:

- γ'_3 is an alignment for trace $\langle a, b, b, d, e, b, d, g, f \rangle$ (page 488)

Wil van der Aalst, January 2014.