Six phases exist in the binary system iron-germanium Fe₃Ge, β, η, Fe₆Ge₅, FeGe and FeGe₂. All phases could be prepared by chemical transport with iodine as transport agent in the temperature range between $T_1$ (600 °C) and $T_2$ (950 °C). Two phase diagrams have been known in the literature from specific experiments of chemical vapour transport. It is now possible to decide which phase diagram is the most valid description.