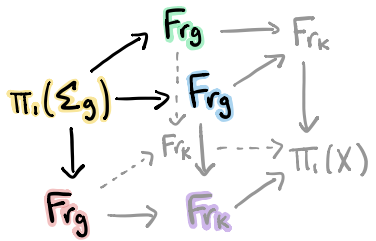

GROUP TRISECTIONS AND SMOOTHLY KNOTTED SURFACES

Sarah Blackwell

University of Georgia

j.w. Kirby, Klug, Longo, Ruppik

GROUP TRISECTIONS AND SMOOTHLY KNOTTED SURFACES

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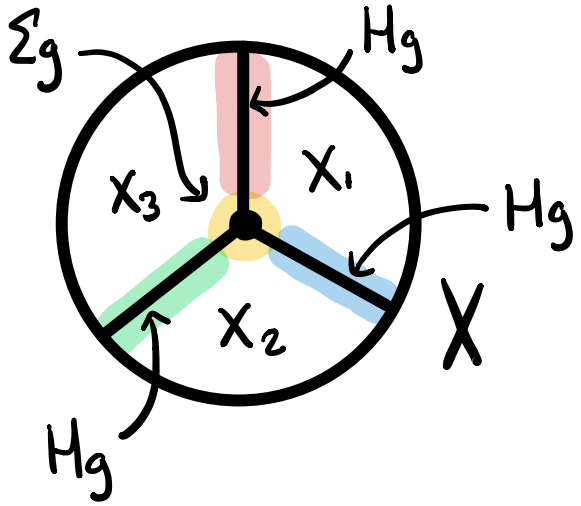
(g,k)-trisection of (closed) 4-mfld X = decomposition $X = X_1 \cup X_2 \cup X_3$ st

[Gay + Kirby]



1) $X_i \cong \natural^k (S^1 \times B^3)$
2) $X_i \cap X_j \cong H_g$
3) $X_1 \cap X_2 \cap X_3 \cong \Sigma_g$

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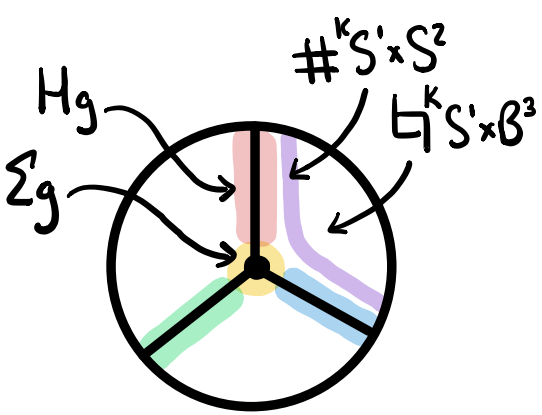
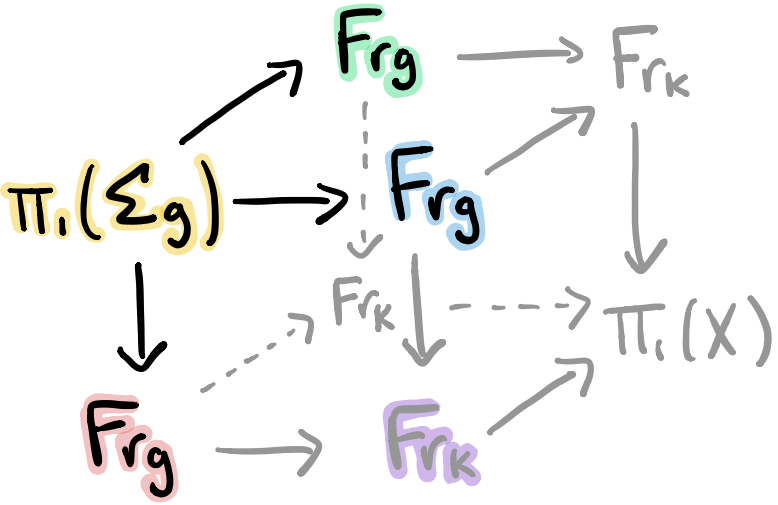


(g,k)- trisection of (closed) 4-mfld X

SVK

Abrams, Gay, Kirby



(g,k)- group trisection of $\pi_1(X)$

GROUP TRISECTIONS AND SMOOTHLY KNOTTED SURFACES

j.w. Kirby, Klug, Longo, Ruppik

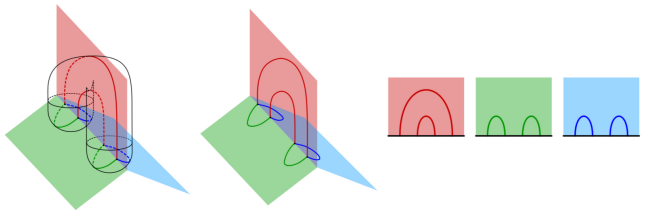


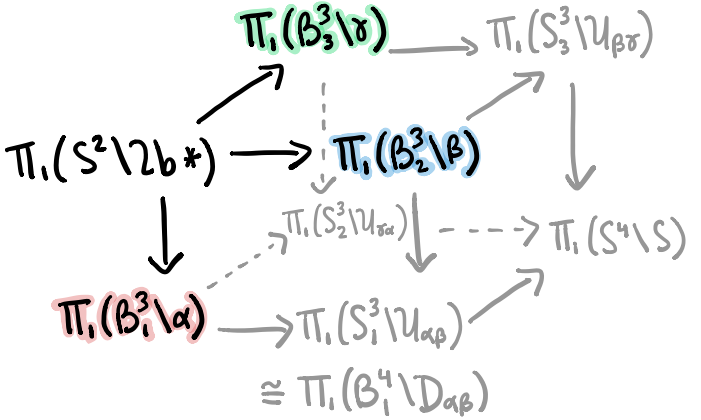
FIGURE 4. A 2–bridge trisection of an unknotted 2–sphere, depicted with the tri-plane in 3–space, along with the corresponding tri-plane diagram.

Bridge trisection for a surface in S^4

[Meier + Zupan]

SVK

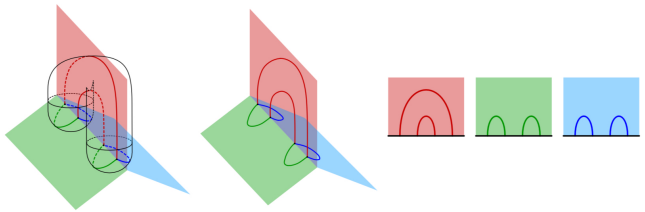
?



Van Kampen diagram for the complement of a surface S in S^4

GROUP TRISECTIONS AND SMOOTHLY KNOTTED SURFACES

j.w. Kirby, Klug, Longo, Ruppik



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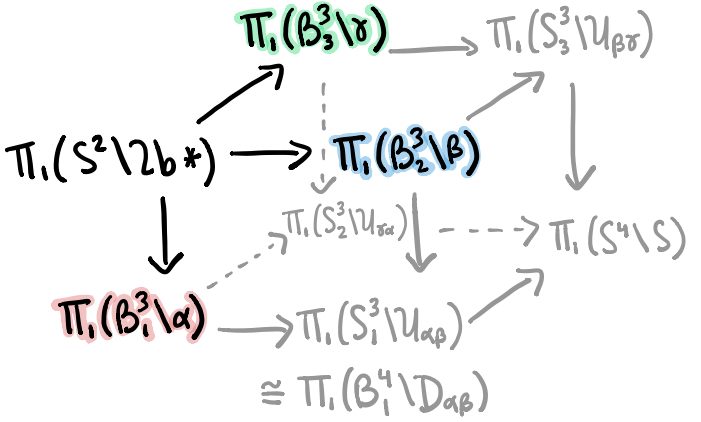
[Meier + Zupan]

SVK

B.K.K.L.R.



Van Kampen diagram for the complement of a surface S in S^4