

Muunnos järjestelmien nimillä, mistä mihin	Muunnos EPSG-koodeilla	PROJ-muunnospolku	Esimerkki (PROJ-versio vähintään 9.6.0)	Esimerkki (PROJ-versio 7.2.1 --> 9.6.0, testattu 9.2.1)
2D				
ETRS-TM35FIN --> ETRS-GK25	EPSG:3067 --> EPSG:3879	+proj=pipeline +step +inv +proj=utm +zone=35 +ellps=GRS80 +step +proj=tmerc +lat_0=0 +lon_0=25 +k=1 +x_0=25500000 +y_0=0 +ellps=GRS80 +step +proj=axisswap +order=2,1	echo "385800 6672200" cs2cs EPSG:3067 EPSG:3879 6673090.92 25496766.53 0.00 echo "385800 6672200" cs2cs EPSG:3067 EPSG:3879 -d 4 6673090.9235 -25496766.5300 0.0000	sama kuin 9.6.0
ETRS-TM35FIN --> EUREF-FIN-GRS80	EPSG:3067 --> EPSG:10690	+proj=pipeline +step +inv +proj=utm +zone=35 +ellps=GRS80 +step +proj=unitconvert +xy_in=rad +xy_out=deg +step +proj=axisswap +order=2,1	echo "385800 6672200" cs2cs EPSG:3067 EPSG:10690 60d10'14.467"N 24d56'30.308"E 0.000 echo "385800 6672200" cs2cs EPSG:3067 EPSG:10690 -w5 60d10'14.4668"N 24d56'30.30792"E 0.000 echo "385800 6672200" cs2cs EPSG:3067 EPSG:10690 -d 9 60.170685222 -24.941752201 0.000000000	echo "385800 6672200" cs2cs EPSG:3067 EPSG:4258 60d10'14.467"N 24d56'30.308"E 0.000 echo "385800 6672200" cs2cs EPSG:3067 EPSG:4258 -w5 60d10'14.4668"N 24d56'30.30792"E 0.000 echo "385800 6672200" cs2cs EPSG:3067 EPSG:4258 -d 9 60.170685222 -24.941752201 0.000000000
ETRS-TM35FIN --> YKJ	EPSG:3067 --> EPSG:2393	+proj=pipeline +step +inv +proj=tinshift +file=fi_nls_ykj_etr35fin.json +step +proj=axisswap +order=2,1	echo "385800 6672200" cs2cs EPSG:3067 EPSG:2393 -d 4 6675001.9644 3385923.0089 0.0000	sama kuin 9.6.0
2D+1D (yhdistelmäkoordinaattijärjestelmät ja korkeusjärjestelmät)				
ETRS-TM35FIN + N2000 --> YKJ + N60 (kolmioittaiset muunnokset: ETRS-TM35FIN-->YKJ ja N2000-->N60)	EPSG:3067+3900 --> EPSG:2393+5717 EPSG:10774 --> EPSG:3901	+proj=pipeline +step +inv +proj=tinshift +file=fi_nls_ykj_etr35fin.json +step +inv +proj=tinshift +file=fi_nls_n60_n2000.json +step +proj=axisswap +order=2,1	echo "385800 6672200 0" cs2cs EPSG:3067+3900 EPSG:2393+5717 -d 4 6675001.9644 3385923.0089 -0.2533 echo "385800 6672200 0" cs2cs EPSG:10774 EPSG:3901 -d 4 6675001.9644 3385923.0089 -0.2533	echo "385800 6672200 0" cs2cs EPSG:3067+3900 EPSG:2393+5717 -d 4 6675001.9644 3385923.0089 -0.2533 echo "385800 6672200 0" cs2cs EPSG:10774 EPSG:3901 -d 4 proj_create: crs not found
YKJ + N60 --> ETRS-TM35FIN + N2000 (kolmioittaiset muunnokset: ETRS-TM35FIN-->YKJ ja N2000-->N60)	EPSG:3901 --> EPSG:10774	+proj=pipeline +step +proj=axisswap +order=2,1 +step +proj=tinshift +file=fi_nls_n60_n2000.json +step +proj=tinshift +file=fi_nls_ykj_etr35fin.json	echo "6675001.9644 3385923.0089 -0.2533" cs2cs EPSG:3901 EPSG:10774 -d 4 385800.0000 6672200.0000 -0.0000	echo "6675001.9644 3385923.0089 -0.2533" cs2cs EPSG:3901 EPSG:3067+3900 -d 4 385800.0000 6672200.0000 -0.0000
N2000-->N60 (kolmioittainen muunnos)	EPSG:3900 --> EPSG:5717	Virhe: vaatii 2D-koordinaattijärjestelmän (ETRS-TM35FIN, YKJ, EUREF-FIN-GRS80)	echo "385800 6672200 0" cs2cs EPSG:3900 EPSG:5717 -d 4 proj_crs_get_geodetic_crs: CRS has no geodetic CRS	echo "385800 6672200 0" cs2cs EPSG:3900 EPSG:5717 -d 4 cannot initialize transformation
ETRS-TM35FIN + N2000 --> ETRS-TM35FIN + N60	EPSG:3067+3900 --> EPSG:3067+5717 EPSG:10774 --> EPSG:3067+5717	+proj=pipeline +step +inv +proj=tinshift +file=fi_nls_ykj_etr35fin.json +step +inv +proj=tinshift +file=fi_nls_n60_n2000.json +step +proj=tinshift +file=fi_nls_ykj_etr35fin.json (kolmioittainen N60-N2000-muunnos YKJ:ssä)	echo "385800 6672200 0" cs2cs EPSG:3067+3900 EPSG:3067+5717 -d 4 385800.0000 6672200.0000 -0.2533 echo "385800 6672200 0" cs2cs EPSG:10774 EPSG:3067+5717 -d 4 385800.0000 6672200.0000 -0.2533	echo "385800 6672200 0" cs2cs EPSG:3067+3900 EPSG:3067+5717 -d 4 385800.0000 6672200.0000 -0.2533 echo "385800 6672200 0" cs2cs EPSG:10774 EPSG:3067+5717 -d 4 proj_create: crs not found
YKJ + N2000 --> YKJ + N60	EPSG:2393+3900 --> EPSG:2393+5717 EPSG:2393+3900 --> EPSG:3901	+proj=pipeline +step +proj=axisswap +order=2,1 +step +inv +proj=tinshift +file=fi_nls_n60_n2000.json +step +proj=axisswap +order=2,1 (kolmioittainen N60-N2000-muunnos YKJ:ssä)	echo "6675001.9644 3385923.0089 0" cs2cs EPSG:2393+3900 EPSG:2393+5717 -d 4 6675001.9644 3385923.0089 -0.2533 echo "6675001.9644 3385923.0089 0" cs2cs EPSG:2393+3900 EPSG:3901 -d 4 6675001.9644 3385923.0089 -0.2533	sama kuin 9.6.0
EUREF-FIN-GRS80 + N2000 --> ETRS-TM35FIN + N60	EPSG:10690+3900 --> EPSG:3067+5717 EPSG:10692 --> EPSG:3067+5717	+proj=pipeline +step +proj=axisswap +order=2,1 +step +proj=unitconvert +xy_in=deg +xy_out=rad +step +proj=utm +zone=35 +ellps=GRS80 +step +inv +proj=tinshift +file=fi_nls_ykj_etr35fin.json +step +inv +proj=tinshift +file=fi_nls_n60_n2000.json +step +proj=tinshift +file=fi_nls_ykj_etr35fin.json (kolmioittainen N60-N2000-muunnos YKJ:ssä)	echo "60.170685222 24.941752201 0" cs2cs EPSG:10690+3900 EPSG:3067+5717 -d 4 385800.0000 6672200.0000 -0.2533 echo "60.170685222 24.941752201 0" cs2cs EPSG:10692 EPSG:3067+5717 -d 4 385800.0000 6672200.0000 -0.2533	echo "60.170685222 24.941752201 0" cs2cs EPSG:4258+3900 EPSG:3067+5717 -d 4 385800.0000 6672200.0000 -0.2533 echo "60.170685222 24.941752201 0" cs2cs EPSG:10692 EPSG:3067+5717 -d 4 proj_create: crs not found
3D --> 2D+1D (geoidimalli)				
ETRS-TM35FIN + N2000 --> EUREF-FIN-GRS80h FIN2023N2000-geoidimalli	EPSG:10774 --> EPSG:10689	+proj=pipeline +step +inv +proj=utm +zone=35 +ellps=GRS80 +step +proj=vgridshift +grids=fi_nls_fin2023n2000.tif +multiplier=1 +step +proj=unitconvert +xy_in=rad +xy_out=deg +step +proj=axisswap +order=2,1 (geoidimalli EUREF-FIN-GRS80:ssä)	echo "385800 6672200 0" cs2cs EPSG:10774 EPSG:10689 -d 9 60.170685222 24.941752201 17.608527129	echo "385800 6672200 0" cs2cs EPSG:10774 EPSG:10689 -d 9 proj_create: crs not found (ei korvaavaa operaatiota ennen versiota 9.6.0)
EUREF-FIN-GRS80h --> ETRS-TM35FIN + N2000 FIN2023N2000-geoidimalli	EPSG:10689 --> EPSG:10774	+proj=pipeline +step +proj=axisswap +order=2,1 +step +proj=unitconvert +xy_in=deg +xy_out=rad +step +inv +proj=vgridshift +grids=fi_nls_fin2023n2000.tif +multiplier=1 +step +proj=utm +zone=35 +ellps=GRS80 (geoidimalli EUREF-FIN-GRS80:ssä)	echo "60.170685222 24.941752201 17.608527129" cs2cs EPSG:10689 EPSG:10774 -d 4 385800.0000 6672200.0000 -0.0000 (FIN2023N2000-operaatio: EPSG:10698 echo "60.170685222 24.941752201 17.608527129" cct -d 9 EPSG:10698 60.170685222 24.941752201 -0.000000000 inf)	echo "60.170685222 24.941752201 17.608527129" cs2cs EPSG:10689 EPSG:10774 -d 4 proj_create: crs not found (ei korvaavaa operaatiota ennen versiota 9.6.0)

EUREF-FIN-GRS80h --> ETRS-TM35FIN + N2000 <i>FIN2005N00-geoidimalli</i>	- (EPSG:10689 --> EPSG:10774 käyttää oletuksena FIN2023N2000-mallia)	+proj=pipeline +step +proj=axisswap +order=2,1 +step +proj=unitconvert +xy_in=deg +xy_out=rad +step +inv +proj=vgridshift +grids=fi_nls_fin2005n00.tif +multiplier=1 +step +proj=utm +zone=35 +ellps=GRS80 (geoidimalli EUREF-FIN-GRS80:ssä)	echo "60.170685222 24.941752201 17.608527129" cct -d 9 EPSG:10696 cs2cs EPSG:10690+3900 EPSG:10774 -d 4 385800.0000 6672200.0000 -0.0029 inf echo "60.170685222 24.941752201 17.608527129" cct -d 9 EPSG:10696 cs2cs EPSG:10692 EPSG:10774 -d 4 385800.0000 6672200.0000 -0.0029 inf (1. FIN2005N00-operaatio (EPSG:10696), 2. EUREF-FIN-GRS80+N2000 --> ETRS-TM35FIN+N2000)	echo "60.170685222 24.941752201 17.608527129" cct -d 9 EPSG:10696 cs2cs EPSG:10690+3900 EPSG:10774 -d 4 proj_create: crs not found (ei korvaavaa operaatiota ennen versiota 9.6.0)
EUREF-FIN-GRS80h --> EUREF-FIN-GRS80 + N60 <i>FIN2000-geoidimalli</i>	EPSG:10689 --> EPSG:10690+5717 EPSG:10689 --> EPSG:10691	+proj=pipeline +step +proj=axisswap +order=2,1 +step +proj=unitconvert +xy_in=deg +xy_out=rad +step +inv +proj=vgridshift +grids=fi_nls_fin2000.tif +multiplier=1 +step +proj=unitconvert +xy_in=rad +xy_out=deg +step +proj=axisswap +order=2,1 (geoidimalli EUREF-FIN-GRS80:ssä)	echo "60.170685222 24.941752201 17.608527129" cs2cs EPSG:10689 EPSG:10690+5717 -d 9 60.170685222 24.941752201 -0.251654043 echo "60.170685222 24.941752201 17.608527129" cs2cs EPSG:10689 EPSG:10691 -d 9 60.170685222 24.941752201 -0.251654043 echo "60.170685222 24.941752201 17.608527129" cct -d 9 EPSG:10694 60.170685222 24.941752201 -0.251654043 inf (FIN2000-operaatio: EPSG:10694)	echo "60.170685222 24.941752201 17.608527129" cs2cs EPSG:10689 EPSG:10690+5717 -d 9 proj_create: crs not found (ei korvaavaa operaatiota ennen versiota 9.6.0)
ETRS-TM35FIN + N2000 --> EUREF-FIN-XYZ <i>FIN2023N2000-geoidimalli</i>	EPSG:10774 --> EPSG:10688	+proj=pipeline +step +inv +proj=utm +zone=35 +ellps=GRS80 +step +proj=vgridshift +grids=fi_nls_fin2023n2000.tif +multiplier=1 +step +proj=cart +ellps=GRS80	echo "385800 6672200 0" cs2cs EPSG:10774 EPSG:10688 -d 4 2883995.0287 1341261.2190 5509976.2038	echo "385800 6672200 0" cs2cs EPSG:10774 EPSG:10688 -d 4 proj_create: crs not found (ei korvaavaa operaatiota ennen versiota 9.6.0)
3D/4D-koordinaatit				
EUREF-FIN-GRS80h --> EUREF-FIN-XYZ	EPSG:10689 --> EPSG:10688	+proj=pipeline +step +proj=axisswap +order=2,1 +step +proj=unitconvert +xy_in=deg +z_in=m +xy_out=rad +z_out=m +step +proj=cart +ellps=GRS80	echo "60.170685222 24.941752201 17.608527129" cs2cs EPSG:10689 EPSG:10688 -d 4 2883995.0287 1341261.2190 5509976.2038	echo "60.170685222 24.941752201 17.608527129" cs2cs EPSG:4937 EPSG:4936 -d 4 2883995.0287 1341261.2190 5509976.2038
EUREF-FIN-XYZ --> ITRF2014-XYZ	EPSG:10688 --> EPSG:7789	Virhe: staattisesta dynaamiseseen datumiin - vaatii epookin	echo "2883995.0287 1341261.2190 5509976.2038" cs2cs EPSG:10688 EPSG:7789 -d 4 --area finland * * inf	echo "2883995.0287 1341261.2190 5509976.2038" cs2cs EPSG:4936 EPSG:7789 -d 4 --area finland * * inf
EUREF-FIN-XYZ --> ITRF2014-XYZ@2025.00	EPSG:10688 --> EPSG:7789	+proj=pipeline +step +inv +proj=deformation +dt=-3 +grids=eur_nkg_nkgrf17vel.tif +step +inv +proj=helmert +x=0.15651 +y=-0.10993 +z=-0.10935 +rx=-0.00312861 +ry=-0.00378935 +rz=0.00403512 +s=0.00529 +convention=position_vector +step +proj=deformation +t_epoch=2000.0 +grids=eur_nkg_nkgrf17vel.tif +step +inv +proj=helmert +x=0 +y=0 +z=0 +rx=0 +ry=0 +rz=0 +s=0 +dx=0 +dy=0 +dz=0 +drx=8.5e-05 +dry=0.000531 +drz=-0.00077 +ds=0 +t_epoch=1989 +convention=position_vector	echo "2883995.0287 1341261.2190 5509976.2038 2025.00" cs2cs EPSG:10688 EPSG:7789 -d 4 --area finland 2883994.3644 1341261.6883 5509976.5863 2025.00 echo "2883995.0287 1341261.2190 5509976.2038 2025.00" cs2cs EPSG:10688 EPSG:7789 -d 4 2883994.3644 1341261.6883 5509976.5863 2025.00	echo "2883995.0287 1341261.2190 5509976.2038 2025.00" cs2cs EPSG:4936 EPSG:7789 -d 4 --area finland 2883994.3644 1341261.6883 5509976.5863 2025.00 echo "2883995.0287 1341261.2190 5509976.2038 2025.00" cs2cs EPSG:4936 EPSG:7789 -d 4 2883994.3647 1341261.6744 5509976.5868 2025.00 (väärä ETRS89-muunnos ilman area-parametria)
ITRF2014-XYZ@2025.00 --> EUREF-FIN-XYZ	EPSG:7789 --> EPSG:10688	+proj=pipeline +step +proj=helmert +x=0 +y=0 +z=0 +rx=0 +ry=0 +rz=0 +s=0 +dx=0 +dy=0 +dz=0 +drx=8.5e-05 +dry=0.000531 +drz=-0.00077 +ds=0 +t_epoch=1989 +convention=position_vector +step +inv +proj=deformation +t_epoch=2000.0 +grids=eur_nkg_nkgrf17vel.tif +step +proj=helmert +x=0.15651 +y=-0.10993 +z=-0.10935 +rx=-0.00312861 +ry=-0.00378935 +rz=0.00403512 +s=0.00529 +convention=position_vector +step +proj=deformation +dt=-3 +grids=eur_nkg_nkgrf17vel.tif	echo "2883994.3644 1341261.6883 5509976.5863 2025.00" cs2cs EPSG:7789 EPSG:10688 -d 4 2883995.0287 1341261.2190 5509976.2038 2025.00	echo "2883994.3644 1341261.6883 5509976.5863 2025.00" cs2cs EPSG:7789 EPSG:4936 -d 4 2883995.0284 1341261.2329 5509976.2033 2025.00 echo "2883994.3644 1341261.6883 5509976.5863 2025.00" cs2cs EPSG:7789 EPSG:4936 -d 4 --area finland 2883995.0287 1341261.2190 5509976.2038 2025.00
EUREF-FIN-XYZ --> ITRF2014-TM35+GRS80h <i>koordinaatit riippuvat epookista: @2025.00 vs. @2000.00</i>	- (ei EPSG-koodia ITRF2014-TM35+GRS80h:lle)	+proj=pipeline +step +inv +proj=deformation +dt=-3 +grids=eur_nkg_nkgrf17vel.tif +step +inv +proj=helmert +x=0.15651 +y=-0.10993 +z=-0.10935 +rx=-0.00312861 +ry=-0.00378935 +rz=0.00403512 +s=0.00529 +convention=position_vector +step +proj=deformation +t_epoch=2000.0 +grids=eur_nkg_nkgrf17vel.tif +step +inv +proj=helmert +x=0 +y=0 +z=0 +rx=0 +ry=0 +rz=0 +s=0 +dx=0 +dy=0 +dz=0 +drx=8.5e-05 +dry=0.000531 +drz=-0.00077 +ds=0 +t_epoch=1989 +convention=position_vector +step +inv +proj=cart +ellps=GRS80 +step +proj=utm +zone=35 +ellps=GRS80	echo "2883995.0287 1341261.2190 5509976.2038 2025.00" cs2cs EPSG:10688 EPSG:7789 -d 4 cct +proj=pipeline +ellps=GRS80 +step +inv +proj=cart +step +proj=utm +zone=35 385800.7220 6672200.5188 17.7392 2025.0000 echo "2883995.0287 1341261.2190 5509976.2038 2000.00" cs2cs EPSG:10688 EPSG:7789 -d 4 cct +proj=pipeline +ellps=GRS80 +step +inv +proj=cart +step +proj=utm +zone=35 385800.2111 6672200.2140 17.6348 2000.0000	echo "2883995.0287 1341261.2190 5509976.2038 2025.00" cs2cs EPSG:4936 EPSG:7789 --area finland -d 4 cct +proj=pipeline +ellps=GRS80 +step +inv +proj=cart +step +proj=utm +zone=35 385800.7220 6672200.5188 17.7392 2025.0000 echo "2883995.0287 1341261.2190 5509976.2038 2000.00" cs2cs EPSG:4936 EPSG:7789 --area finland -d 4 cct +proj=pipeline +ellps=GRS80 +step +inv +proj=cart +step +proj=utm +zone=35 385800.2111 6672200.2140 17.6348 2000.0000

[illegible]

EUREF-FIN-XYZ --> ITRF2020-XYZ@2025.00	EPSG:10688 --> EPSG:9988	+proj=pipeline +step +inv +proj=deformation +dt=-3 +grids=eur_nkg_nkgrf17vel.tif +step +inv +proj=helmert +x=0.15651 +y=-0.10993 +z=-0.10935 +rx=-0.00312861 +ry=-0.00378935 +rz=0.00403512 +s=0.00529 +convention=position_vector +step +proj=deformation +t_epoch=2000.0 +grids=eur_nkg_nkgrf17vel.tif +step +inv +proj=helmert +x=0 +y=0 +z=0 +rx=0 +ry=0 +rz=0 +s=0 +dx=0 +dy=0 +dz=0 +drx=8.5e-05 +dry=0.000531 +drz=-0.00077 +ds=0 +t_epoch=1989 +convention=position_vector +step +proj=helmert +x=0.0014 +y=0.0009 +z=-0.0014 +rx=0 +ry=0 +rz=0 +s=0.00042 +dx=0 +dy=0.0001 +dz=-0.0002 +drx=0 +dry=0 +drz=0 +ds=0 +t_epoch=2015 +convention=position_vector	echo "2883995.0287 1341261.2190 5509976.2038 2025.00" cs2cs EPSG:10688 EPSG:9988 -d 4 2883994.3671 1341261.6907 5509976.5852 2025.00 echo "2883995.0287 1341261.2190 5509976.2038 2025.00" cs2cs EPSG:10688 EPSG:9988 -d 4 --area finland 2883994.3671 1341261.6907 5509976.5852 2025.00 (tarkistus area-parametrilla) echo "2883995.0287 1341261.2190 5509976.2038 2025.00" cs2cs EPSG:4936 EPSG:9988 -d 4 --area finland 2883994.3671 1341261.6907 5509976.5852 2025.00 (toimii myös EPSG:4936 area-parametrin kanssa) echo "2883995.0287 1341261.2190 5509976.2038 2025.00" cct -d 4 @EFI-ITRF2020.txt 2883994.3671 1341261.6907 5509976.5852 2025.0000 (pipeline tiedostossa)	echo "2883995.0287 1341261.2190 5509976.2038 2025.00" cs2cs EPSG:4936 EPSG:9988 -d 4 --area finland 2883994.3671 1341261.6907 5509976.5852 2025.00 echo "2883995.0287 1341261.2190 5509976.2038 2025.00" cct -d 4 @EFI-ITRF2020.txt 2883994.3671 1341261.6907 5509976.5852 2025.0000
ITRF2020-XYZ@2025.00 --> EUREF-FIN-XYZ	EPSG:9988 --> EPSG:10688	+proj=pipeline +step +inv +proj=helmert +x=0.0014 +y=0.0009 +z=-0.0014 +rx=0 +ry=0 +rz=0 +s=0.00042 +dx=0 +dy=0.0001 +dz=-0.0002 +drx=0 +dry=0 +drz=0 +ds=0 +t_epoch=2015 +convention=position_vector +step +proj=helmert +x=0 +y=0 +z=0 +rx=0 +ry=0 +rz=0 +s=0 +dx=0 +dy=0 +dz=0 +drx=8.5e-05 +dry=0.000531 +drz=-0.00077 +ds=0 +t_epoch=1989 +convention=position_vector +step +inv +proj=deformation +t_epoch=2000.0 +grids=eur_nkg_nkgrf17vel.tif +step +proj=helmert +x=0.15651 +y=-0.10993 +z=-0.10935 +rx=-0.00312861 +ry=-0.00378935 +rz=0.00403512 +s=0.00529 +convention=position_vector +step +proj=deformation +dt=-3 +grids=eur_nkg_nkgrf17vel.tif	echo "2883994.3671 1341261.6907 5509976.5852 2025.00" cs2cs EPSG:9988 EPSG:10688 -d 4 2883995.0288 1341261.2190 5509976.2038 2025.00 echo "2883994.3671 1341261.6907 5509976.5852 2025.00" cs2cs EPSG:9988 EPSG:4936 -d 4 --area finland 2883995.0288 1341261.2190 5509976.2038 2025.00 echo "2883994.3671 1341261.6907 5509976.5852 2025.00" \$PROJ/cct -d 4 @I20-EFI.txt 2883995.0288 1341261.2190 5509976.2038 2025.0000 (pipeline tiedostossa)	echo "2883994.3671 1341261.6907 5509976.5852 2025.00" cs2cs EPSG:9988 EPSG:4936 -d 4 --area finland 2883995.0288 1341261.2190 5509976.2038 2025.00 echo "2883994.3671 1341261.6907 5509976.5852 2025.00" cct -d 4 @I20-EFI.txt 2883995.0288 1341261.2190 5509976.2038 2025.0000
ITRF2014-XYZ@2025.00 --> ITRF2020-XYZ@2025.00	EPSG:7789 --> EPSG:9988	+proj=helmert +x=0.0014 +y=0.0009 +z=-0.0014 +rx=0 +ry=0 +rz=0 +s=0.00042 +dx=0 +dy=0.0001 +dz=-0.0002 +drx=0 +dry=0 +drz=0 +ds=0 +t_epoch=2015 +convention=position_vector	echo "2883994.3644 1341261.6883 5509976.5863 2025.00" cs2cs EPSG:7789 EPSG:9988 -d 4 2883994.3670 1341261.6908 5509976.5852 2025.00	sama kuin 9.6.0
EUREF-FIN-XYZ --> WGS84-XYZ@2025.00 (WGS84:ään nollamuunnos)	EPSG:10688 --> EPSG:4978	+proj=noop	echo "2883995.0287 1341261.2190 5509976.2038 2025.00" cs2cs EPSG:10688 EPSG:4978 -d 4 2883995.0287 1341261.2190 5509976.2038 2025.00 echo "2883995.0287 1341261.2190 5509976.2038 2025.00" cs2cs EPSG:10688 EPSG:4978 -d 4 --area finland 2883995.0287 1341261.2190 5509976.2038 2025.00 (area-parametri ei auta WGS84:n kanssa)	echo "2883995.0287 1341261.2190 5509976.2038 2025.00" cs2cs EPSG:4936 EPSG:4978 -d 4 2883995.0287 1341261.2190 5509976.2038 2025.00 echo "2883995.0287 1341261.2190 5509976.2038 2025.00" cs2cs EPSG:4936 EPSG:4978 -d 4 --area finland 2883995.0287 1341261.2190 5509976.2038 2025.00 (area-parametri ei auta WGS84:n kanssa)
EUREF-FIN-GRS80h --> WGS84-GRS80@2025.00 (WGS84:ään nollamuunnos)	EPSG:10689 --> EPSG:4326	+proj=noop	echo "60.170685222 24.941752201 17.608527129" cs2cs EPSG:10689 EPSG:4326 -d 9 60.170685222 24.941752201 17.608527129 echo "60.170685222 24.941752201 17.608527129" cs2cs EPSG:10689 EPSG:4326 -d 9 --area finland 60.170685222 24.941752201 17.608527129	echo "60.170685222 24.941752201 17.608527129" cs2cs EPSG:4937 EPSG:4326 -d 9 60.170685222 24.941752201 17.608527129 echo "60.170685222 24.941752201 17.608527129" cs2cs EPSG:4937 EPSG:4326 -d 9 --area finland 60.170685222 24.941752201 17.608527129