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Demographic Effects on Mid-Air Gesture Preference for Control of Devices: Implications for Design

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Abstract. After eliciting 129 potential task-gesture combinations for 23 Smart TV tasks with a Canadian sample (N=22), we then conducted studies that collected participant preference scores on mid-air bare-hand gestures for TV control in both Canada (N=747) and China (N=300), and we analyzed the effect of characteristics of individual participants on gesture preference scores. The results showed that age and cultural differences are important in determining task-gesture preferences. While exploratory, the present results indicate a need for more research in this area and suggest that one of two possible strategies may need to be adopted in designing future gesture interactions: 1) develop customized task-gesture combinations for different cultures and different age groups; 2) develop a core set of task-gesture combination possibilities and let users choose which gesture they want to use for each task.

Keywords: Mid-air/bare-hand gesture design, preference rating, individual characteristics.

1 Background

Early work on gesture-based interaction focused on table-top interfaces [1]. Gesture interaction with a TV was also considered, but it still required a hand-held controller [2]. Other contexts considered for gestural interaction have included driving [3] and gesturing with wearable devices [4]. In this paper we focus on mid-air gesturing, a natural interaction method that lets users control a system remotely without needing a special input device. With embedded cameras on Smart TVs, designers of electronic devices are considering the use of mid-air free hand interactions to control some of the major commands on devices such as Huawei's X65, the Hisense U7, and the Samsung F-series. While several researchers have proposed mid-air gesture designs for TV control [5][6][7][8][9], the input method is relatively new to most people and there is as yet no "standard" vocabulary of gestures. Thus it is difficult for UI designers to design gestures which will be widely accepted by users, and design recommendations are needed that will help UI designers choose the right gesture for different combinations of people and tasks.

2 Objective

Our objective in this research is to understand how the characteristics of individual users affect preference for gestures, focusing on cultural, age, and sex differences. This is a first step towards the development of evidence-based design recommendations concerning how to choose gestures for different groups of people to use when carrying out a particular interaction task.

3 Methodology

We ran two studies, one in Canada and one in China. The gestures used in the preference evaluation study were based on an earlier gesture elicitation study conducted in Canada (N=22) using 23 TV control tasks (see Table 3 in appendix). The gesture elicitation identified 129 salient gesture-task combinations, or approximately six gestures per task on average. The Canadian study participants (N=747) then used the same 23 tasks and 87 gestures, with gestures mapped to each task based on the suitability of the gesture for the task, as identified in the elicitation study, resulting in 129 task-gesture combinations. The participants in China (N=300) rated their preference for a subset of 36 of the gestures matching with 12 of the tasks. Both the Chinese and Canadian participants used a 7-point Likert scale to rate how suitable each gesture was for carrying out/controlling the task that it was assigned to (Figure 1). There were a total of 40 gesture-task combinations in the Chinese study, or a little over three gestures per task on average.



Figure 1. Example of question and rating screen. The gesture image in this figure is an example frame from a GIF animation presented in the online questionnaire.

Across the two studies we addressed the following research questions:

• RQ1: Do preferred gestures, and gesture-task combinations differ according to the age of Canadian participants?

• RQ2: Do preferred gestures, and gesture-task combinations differ according to the age of Chinese participants?

2

• RQ3: Do Canadian and Chinese users differ in their preferred mappings of gestures to tasks?

4 Results

We began with an analysis of possible bias in use of the rating scale. Chinese participants tended to use higher ratings, and older people tended to use lower ratings. We ran one set of analyses assuming that absolute ratings were appropriate, and we used a second analysis where the ratings were transformed so as to reduce systematic differences in how participants used the rating scale (c.f.[10]). In this second analysis (reported in this paper), the rating scale data were transformed for each participant using a percentile transformation. Each person's set of rating data was converted to a uniform distribution between 0 and 1 by converting each rating point to a percentile equivalent and then dividing by 100.

Preliminary analysis showed that age effects were much stronger than sex effects in both the Canadian and Chinese samples and thus RQ1 focused on age. We used linear discriminant analysis (LDA) to identify a subset of task gesture combinations that differentiated between young (18-24) and older (65+) participants and plotted the corresponding distributions of normalized preferences as box plots (for the task gesture combinations having the highest LDA coefficients), first for the Canadian sample (Figure 2) and then for the Chinese sample (RQ2, Figure 3). Descriptions of the Task-Gesture combinations are provided in Table 1 where the first two columns refer to the Canadian sample, the medians for the older people on combinations T7G45, T22G50 and T12G58 are above the corresponding 75th percentiles for the 18-24 year olds. For the Chinese sample the medians for older people are similarly higher for T18G40, and perhaps T3G52 but are lower (the media is close to the 25th percentile for the young participants) for T22G48.



Figure 2. Boxplot for age group normalized preference comparison (18-24 vs. 65+) among Canadian task-gesture combinations. Plot shows the top 12 (10%) of task gesture combinations ranked by size of discriminating function coefficient.



Figure 3. Boxplot for age group normalized preference comparison among Chinese task-gesture combinations. Top 8 (20%) task gesture combinations ranked by LDA coefficient.



Canadian Data Top 10%			Chinese Data Top 20%			
Code	Gestures x Task	Illustratoin	Code	Gestures x Task	Illustratoin	
T4G53	Task: Unmute Gesture: Full hand pinch opening and closing ("blah blah")		T18G40	Task: Zoom in Gesture: Upright palm moving up	A A	
T18G2	Task: Zoom in Gesture: Palms moving away.	PPQQ	T17G34	Task: Move backward Gesture: Upright fist moving left	+	
T2G5	Task: Power off Gesture: Waving	"A	T3G52	Task: Mute Gesture: Index on lips (gesture for "shush").	Hun	
T23G51	Task: Volume down Gesture: Covering the ear with hand	(C)	T7G66	Task: Home Gesture: Index-middle roof sign		
T12G58	Task: Confirm (Yes) Gesture: Thumb up	EL	T22G48	Task: Volume up Gesture: Turning a knob clockwise	B	
T22G50	Task: Volume up Gesture: Hand behind ear (sign of "listening")		T14G8	Task: Play Gesture: Opening to palm	→ YML	
T14G25	Task: Play Gesture: Palm pushing	E.	T7G7	Task: Home Gesture: Closing to fist		
T10G21	Task: Go to first Gesture: Rotated palm flicking left	- €)	T14G25	Task: Play Gesture: Palm pushing	E.	
T2G7	Task: Power off Gesture: Closing to fist	£~, ► (Ð)				
T7G4 5	Home Gesture: Splay closing to full hand pinch	Å.+ \$\$				
T19G41	Task: Zoom out Gesture: Upright palm moving down	£m↓				
T21G21	Task: Previous Gesture: Rotated palm flicking left	- €				

We then carried out Linear Discriminant Analysis (LDA) comparing normalized preferences for overlapping task-gesture combinations between the Chinese and Canadian samples. We conducted LDA and selected the eight gesture-task combinations that had the highest LDA Coefficients (Table 2), presenting the distributional differences as box plots (Figure 4).



Figure 4. boxplot for age group preference comparison among Canadian and Chinese data task-gesture combinations. Plot shows the top 10% of task-gesture combinations ranked by LDA result.

As shown in Figure 4, the largest differences between the Canadian and Chinese samples were with respect to the T18G40, T22G48 and T18G44 combinations.

Code	Gestures x Task	Illustration
T18G40	Task: Zoom in Gesture: Upright palm moving up	111
T17G34	Task: Move backward Gesture: Upright fist moving left	↓
T22G48	Task: Volume up Gesture: Turning a knob clockwise	B
T3G52	Task: Mute Gesture: Index on lips (gesture for "shush")	Ĩ
T16G36	Task: Move forward Gesture: Pointing-index rotating clockwise	5
T9G12	Task: Run/Select Gesture: Index tapping	1
T22G26	Task: Volume up Gesture: Upward palm moving up	1
T18G44	Task: Zoom in Gesture: Full hand pinch opening to splay	m → Sin

Table 2. Top differentiating task gesture combinations between Canadian and Chinese preferences as determined by discriminant function coefficients.

5 DISCUSSION

Our results show that demographic variables influence which gesture will work best for a particular task. Age and cultural differences seem to be important in determining task-gesture preferences (but not sex in our study). For the Canadian sample, the older people (65+) showed higher preferences on combinations T7G45, T22G50 and T12G58 as compared to the 18-24 year olds. T22G50 (cupping the hand behind the ear for volume up) and T12G58 (the thumbs up gesture to confirm something) are gestures which occur quite frequently in in-person communication, so they may find the gesture familiar and natural. Cupping the hand behind the ear is also a strategy for effectively increasing the size of the ear and improving hearing in cases where a person (especially an older person) is having trouble hearing something. For younger people who have grown up with social media, thumbs up may more likely mean liking rather than confirmation, thus explaining their lower ratings for the task gesture combination. For T7G45 (the splayed hand closing to a pinch) may be familiar to some older people as a gesture used by orchestral conductors to signify completion, which could also be viewed as going home. One feature of all three of these combinations is that they only use one hand and thus tend to use less energy than a two-handed gesture. For the Chinese sample, T22G48 (turning a knob clockwise to volume up) may have been less preferred because it puts more strain on the hand to make the relatively fine movement. The largest differences between the Canadian and Chinese samples were with respect to the T18G40, T22G48 and T18G44 combinations. These effects may reflect cultural differences. For instance T18G40 (a gesture that moves the palm up to represent a zoom) does not seem natural to a Canadian. Interestingly the T22G48 (turning a knob clockwise to volume up) was less preferred by the Chinese sample perhaps reflecting the fact that the younger people in the Chinese sample were less familiar with that type of analogue technology. For a complete list of task-gesture combinations used in this research, see Table 3 in the appendix.

6 CONCLUSIONS

Our results show that there is unlikely to be a "one size fits all" set of gestures that can be mapped to different tasks and that will work across groups of people with different demographics. We observed, even after adjusting scoring bias, cultural differences between Chinese and Canadian participants as well as demographic differences between young and old in both the Chinese and Canadian samples. Furthermore, the gestures that differentiated between young and old in Canada differed from those that differentiated young and old in the Chinese sample. We should note that the two studies that we carried out represent exploratory research and that further research is needed to find a comprehensive set of gesture task combinations that may work for different cultures and different demographics across, and within, cultures. While the present results are not comprehensive, they demonstrate significant problems for the one size fits all approach, with the best task gesture combinations depending on the type of person who will be using the system. This makes design a common set of gestures that will suit everyone very challenging, if not impossible (see also [11]). One strategy for future mid-air gesture design may be to let people choose, from a small set of gestures, which one they want to use for a particular task. In this approach, designers will select a promising set of gestures that map well to a particular task and will then leave the final decision of which gesture to use to the user.

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References

- Epps, J., Lichman, S., & Wu, M. (2006, April). A study of hand shape use in tabletop gesture interaction. In CHI'06 extended abstracts on human factors in computing systems (pp. 748-753).
- Kim, S. H., Ok, J., Kang, H. J., Kim, M. C., & Kim, M.: An interaction and product design of gesture based TV remote control. In CHI'04 extended abstracts on Human factors in computing systems, 1548-1548 (2004).
- Riener, A., Ferscha, A., Bachmair, F., Hagmüller, P., Lemme, A., Muttenthaler, D., Pühringer, D., Rogner, H., Tappe, A. & Weger, F.: Standardization of the in-car gesture interaction space. In Proceedings of the 5th International Conference on Automotive User Interfaces and Interactive Vehicular Applications, 14-21, (2013).
- Zeng, L. X., Jiang, X., & Dai, C. Q.: Design principle of gesture interaction in the wearable device. Packag. Eng, 36(20), 135-138 (2015).
- 5. Vatavu, R. D.: User-defined gestures for free-hand TV control. In Proceedings of the 10th European conference on Interactive tv and video, 45-48 (2012).
- 6. Wu, H., & Wang, J.: User-defined body gestures for TV-based applications. In 2012 Fourth International Conference on Digital Home, 415-420, IEEE (2012).
- Dong, H., Danesh, A., Figueroa, N., & El Saddik, A.: An elicitation study on gesture preferences and memorability toward a practical hand-gesture vocabulary for smart televisions. IEEE access, 3, 543-555 (2015).
- Stec, K., & Larsen, L. B.: Gestures for controlling a moveable tv. In Proceedings of the 2018 ACM International Conference on Interactive Experiences for TV and Online Video, 5-14 (2018).
- Vatavu, R. D., & Zaiti, I. A.: Leap gestures for TV: insights from an elicitation study. In Proceedings of the ACM International Conference on Interactive Experiences for TV and Online Video, 131-138 (2014).
- Mansoury, M., Burke, R., & Mobasher, B.: Flatter is better: Percentile Transformations for Recommender Systems. arXiv preprint arXiv:1907.07766 (2019).
- Wu, H., Zhang, S., Liu, J., Qiu, J., & Zhang, X.: The gesture disagreement problem in free-hand gesture interaction. International Journal of Human–Computer Interaction, 35(12), 1102-1114 (2019).

Appendix

Table 3. List of the 129 Gesture Task Combinations used in the Canadian study. The overlapping subset of 36 combinations used in the Chinese study are highlighted with grey shading.

Pains coming away T161 Pains proming away T162 Mover on Charge gamma T164 Index and de hancing T164 Index and de hancing T164 Barns prime cover T163 Pains prime cover T164 Mark Clapping T1464 Mark of the point T164 Point of the point T164 Mark of the point T164 Point of the point T164 Point of the point T1664 The point of the point T164 Point of the point T164 Point of the point T1643 Point of the point T1643 Point of the point T1643 Point of the point T1644 Poin	Task	Gesture	Code	Task	Gesture	Code
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Prover of todes makes backing T164 Pointing index poking T164 Pointing index		Waving	T1G5		Closing to fist	T14G7
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 Ummter Hand puch opening and closing (estimet for 'Bah blah') 14/03 Hore Heinde er (sjon of 'Bacimage') 14/02 Forehand slapping Tiscour sign (both hands) T4/22 Forehand slapping T5020 Upright fast moving right T16633 Index midger moving right T16635 Painting index cotaing counter-clockwise T5027 Pointing index cotaing counter-clockwise T5027 Pointing index cotaing counter-clockwise T5027 Pointing index cotaing counter-clockwise T10737 Index middle insoching T6054 Pointing index cotaing counter-clockwise T10737 Index middle insoching T6054 Pointing index cotaing counter-clockwise T10737 Tak our fingers (folded thamb) T6054 Closing to fast molei flagers T6054 Closing to fast molei flagers T6054 Closing to fast molei flagers T6054 Closing to fast mangle with thamb and index finger with both hand T6054 Closing to fast mangle with thang T6055 Pat four fingers (folded thamb) T6054 Closing to fast molei flagers T70575 Maka a tanagle with flagers T70576 Maka a tanagle with flagers T70576 Maka a tanagle with flagers T70576 Maka a tanagle with flagers T90513 Thanbu flagers T10514 Maka a tanagle with flagers T10515 Pach moving left T20249 Pach moving left T20249 Pach moving left T20249 Pank moving right T20249		Index on lips (gesture for "shush")	T4G52		Ponting-index rotating clockwise	T10G30
Hand behnd ear (sign of %terning*) 74650 Timeour sign (oth hands) 74650 Forehand slapping 75614 Timube the moving left 7566 Denting-index containg contre-clockwise 7566 Operating to palm 7666 Pulk mad pinch opering to splay (holdone gesture) 76654 Operating to palm 7665 Pulk mad pinch opering to splay (holdone gesture) 76654 Uright palm noving up 766644 Uright palm noving up 76654 Vestary sign 76674 Uright palm noving up 76654 Rate at single with all fingers 76674 Uright palm noving up 76654 Make a stringle with all fingers 76674 Closing to fist 76674 Splay closing to fill hand pinch 77657 Make a stringle with all fingers 77657 Splay closing to fill hand pinch 776554 </td <td>Unmute</td> <td>Full hand pinch opening and closing (gesture for "blah blah")</td> <td>T4G53</td> <td>Upright palm moving right</td> <td>T16G31</td>	Unmute	Full hand pinch opening and closing (gesture for "blah blah")	T4G53		Upright palm moving right	T16G31
Timeout sign (both hands) T4C28 Forchal slapping T5C14 Thumb left moving left T5C30 Dirght palm rotating left T5C30 Pointing-index rotating counter-clockwise T5C64 Pointing-index rotating counter-clockwise T5C64 Pointing-index rotating counter-clockwise T5C64 Participation of the part of t		Hand behind ear (sign of "listening")	T4G50		Upright fist moving right	T16G33
Back Funching lapping T5G14 Sciessors sign moving right T1669 Dyright palm rotating left T5G35 Pack moving left T17G33 Dorining-index sorking left T15G36 Norward left T17G33 Opering to palm T6G5 Pointing-index rotating counter-clockwise T17G37 Index-middle knocking T6G58 Scissors sign moving left T17G37 Pall hand pinch opering to splay (hololenz gesture) T6G54 Scissors sign moving left T17G37 Index rotating counter-clockwise T16G36 Scissors sign moving left T17G37 Index rotating counter-clockwise T16G47 Scissors sign moving left T17G37 Index rotating counter-clockwise T16G34 Palk and mick opering to splay T18G44 Victory sign T6G54 Count off Scient off S		Timeout sign (both hands)	T4G28	11	Index trigger moving right	T16G67
Back Image left and routing left T5020 Dyright palan routing left T5054 Dyright palan routing left T5054 Derming index swiping left T5054 Dyright palan routing left T17032 Waving T6065 Dyright palan routing left T17032 Waving T6054 Tumb up T6054 Tumb up T6054 Tumb up T6054 Tumb up T6054 Chapring T6054 Tumb up T6054 Chapring that nowing up T16032 Dyright palan moving up T16054 Constraint T6054 Constraint T10657 Make a trangle with tumb and inden finger with both hands T70555 Make a trangle with all fingers T70555 Make a trangle with all fingers T70555 Make a trangle with all finger T6054 Dyright palan moving left T20007 Make a trangle with all finger T70555 Make a trangle with all finger T6054		Forehand slapping	T5G14		Scissors sign moving right	T16G69
BackUpright gam noting leftT17632Pointing-index rotating counter-clockwiseT5637Opering to palmT6638Opering to palmT6638Full hand pinch opering to splay (hololen: gesture)T6638ClappingT6644Thumb upT6638ClappingT6644Thumb upT6638ClappingT6644Thumb upT6638Victory signT6634Urgight palm noving leftT17632Urgight palm noving upT6644Closing to fistT6634Closing to fistT6635Closing to fistT6635Closing to fistT6635Closing to fistT6635Closing to fistT6635Make a timage with diffagersT76555Closing to fistT76555Closing to fistT76555Closing to fistT76555Index rugingT8619Vigight palm noving leftT20631Index tappingT9613Index tappingT9613Index tappingT9613Index tappingT9613Index tappingT9613Index tappingT9613Index tappingT10614Index tappingT10614Index tappingT10615Index tappingT10615Index tappingT10616Index tappingT10616Index tappingT10616Index tappingT10616Index tappingT10616Index tappingT10616 <t< td=""><td></td><td>Thumb left moving left</td><td>T5G20</td><td></td><td>Pinch moving left</td><td>T17G30</td></t<>		Thumb left moving left	T5G20		Pinch moving left	T17G30
Back Pointing-index swiping left TSG4 Index-middle mocking TSG4 Pointing-index rotating counter-clockwise TSG37 Opening to palm TGG3 Waring TGG3 Full hand pinch opening to splay (hololenz gesture) TGG44 Thumb up TGG34 Viery sign TGG34 Upright fait moving up (Costing to fist moving up (TIG37) Camera fingers sign moving away Closing to fist moving up (TIG37) TGG34 Upright palm noving up (TIG37) TGG34 Closing to fist moving up (TIG37) TGG37 Make a triangle with all fingers TGG37 Make a triangle moving up T2G		Upright palm rotating left	T5G35	1	Upright palm moving left	T17G32
Index-middle knocking TSG6 Pointing-index rotating counter-clockwise T1G37 Opering to palm TGG8 Waving TGG8 Full hand pinch opening to splay (hololenz gesture) TGG38 Clapping TGG44 Thumb up TGG53 Clapping TGG44 Upright palm moving up TGG44 Victory sign TGG54 Upright palm moving up TGG54 Closing to fist and hold it long TGG55 Fall kand pinch opening to splay (holdenz gesture) TGG44 Upright palm moving up TGG54 Upright palm moving up TGG55 Fall four fingers (folded thumb) TGG64 Closing to fist TG67 Splay closing to fial mad pinch TTG57 Make a triangle with all fingers TTG67 Splay closing to fial mad pinch TTG655 Index-middle roof sign TGG53 Index pinching TGG7 Splay closing to fial mad pinch TTG657 Index spinging TGG12 Index spinging	Back	Pointing-index swiping left	T5G54	Move	Upright fist moving left	T17G34
Pointing-index rotating counter-clockwise TriGo Pointing-index rotating counter-clockwise TriGo Waving TriGo Waving TriGo Waving TriGo Waving TriGo Waving TriGo Cancer alloger incomparison TriGo Tumb up TriGo Tumb up TriGo Cancer alloger incomparison TriGo Tumb up TriGo Cancer alloger incomparison TriGo Cancer alloger incomparison TriGo Closing to fist and hold it ing TriGo Closing to fist and hold it ing TriGo Closing to fist and hold it ing TriGo Make a triangle with all fingers TriGo Make a triangle with all fingers TriGo Make a triangle with all finger TriGo Judex pinching TriGo Make a triangle with all finger TriGo Make a triangle with all finger TriGo Make a triangle with all finger TriGo Index pinching TriGo		Index-middle knocking	TSG6	hackward	Pointing-index rotating counter-clockwise	T17G37
Comma uncertain transmission 17638 1713670 Waving Toffa 1713670 Waving Toffa 1713670 Waving Toffa 1713670 Kativation Camera fingers sign moving way T18644 Chapping Toffa 1713670 Camera fingers sign moving way T18642 Urright palm moving up T6634 Victory sign T6644 Urright palm moving up T6644 Closing to fist and hold it long T6645 Closing to fist and hold it long T6644 Closing to fist and hold it long T6655 Fair four fingers (folded tumb) T6664 Closing to fist T7655 Make a triangle with all fingers T7656 Index pinching T6610 Index pinching index poking T		Dointing index rotating counter clockwice	T5G37		Index trigger maxing left	T17C68
		Opening to asles	T6C9	11	Calescon alon maning ten	T17000
Warning Warning 106-7 Full hand pinch opening to splay (hololenz gesture) TG644 Thumb up TG654 Chapring T664 Make pinching TG611 Victory sign TG624 Upright palm moving up TG664 Closing to fist and hold it long TG655 Closing to fist and hold it long TG674 Closing to fist and hold it long TG675 Closing to fist and hold it long TG676 Closing to fist and hold it long TG676 Make a triangle with all fingers TG676 Splay closing to full hand pinch TG676 Splay closing to full hand pinch TG645 Closing to fist and hold it long TG676 Make a triangle with all fingers TG676 Make a triangle with fundp pinch TG645 Index pinching TG667 Index pinching TG667 Index pinching TG667 Index tapping TG611 Index pinching TG612 Index tapping index ophing TG612		Opening to pain	1008		Scissors sign moving len	11/G/0
Full hand pinch opening to splay (hololenz gesture) 10644 The moly p T0653 Capping T0644 Chapping T0644 Victory sign T0654 Upright palm moving up T0640 Closing to fist and hold it long T0654 Closing to fist and hold it long T0654 Closing to fist and hold it long T0657 Make a triangle with and minek finger with both hands T0657 Make a triangle with all fingers T0657 Closing to fist and hold it long T0657 Closing to fist and hold it long T0657 Make a triangle with all fingers T0657 Closing to fist and hold it long T0657 Closing to fist and hold it long T0657 Closing to fist and hold it long T0664 Splay Closing to fist and hold it long T0657 Upright palm moving down T19645 Pinch moving down T12664 Naviger Index trapping T06641 Naviger Index trapping T06641 Closing to fist T06651 T0		Waving	1665		Camera fingers sign moving away	T18G40
Activat memThumb upTG658 1064Full hand pinch opening to splayT18678 11862Activat Index pinchingT6611T6642T6677T6674T18623Uright palm moving upT6640Uright palm moving upT18638Uright palm noving upT6644T6677T6674T19643Closing to fist and hold it longT6675Splay closing to full hand pinchT19643Closing to fist and hold it longT6757Splay closing to full hand pinchT19643Splay closing to full hand pinchT7657T6677T6677Splay closing to full hand pinchT76455T6677T06671Splay closing to full hand pinchT7655T6677T06671Index pinchingT6610T76655T6677T0677NavigatIndex pinchingT8610T20621Index pinchingT9612Tombe find moving effatT21621Uright nam movingT9612Tombe find moving leftT21622Uright palm moving ifT21614T21622Index tappingT9612Tombe find moving upT22640Index tappingT10614T0621Tumb if in moving upT22640Index tapping movieT10621Time a knob clockwiseT22640Index tapping wideT10615T0621Turing a knob clockwiseT22640Index tapping wideT10615T0621Turing a knob clockwiseT22640Index tapping wideT10615T0621Turing a knob clockwiseT22640Index tapping		Full hand pinch opening to splay (hololenz gesture)	T6G44		Opening the hook-shape pinch to open thumb-index	T18G42
Activat memu Victory signClappingToG41 ToG11 Upright palm moving upToG40 ToG40 ToG40Palms moving upTISG2 Pinch moving upClosing to fist and hold it longToG55 ToG77Closing to fist and hold it longToG640 TOG77Make a triangle with all fingersTrG677 ToG57Closing to fist and hold it longTrG677 TOG77Make a triangle with all fingersTrG677 ToG57Splay closing to fist and hold it longTrG677 TOG57Make a triangle with all fingersTrG677 ToG57Splay closing to fial hand pinchTrG677 TOG57NavigatiUpright nalm novingTrG677 Tog1ay closing to fial hand pinchTrG6767 ToG57NavigatiIndex-middle roof signTrG676 ToG55Index pointingTrG676 ToG57NavigatiIndex finder finder movingTrG676 ToG55Index traingle with all fingersTrG676 ToG55Index rootingTrG676 ToG57Index spointingTrG676 ToG57Index spointingTrG676 ToG57Index traingleTrG676 ToG57Index spointingTrG676 ToG57Index spointingTrG676 ToG57Index spointingTrG676 ToG57Index spointingTrG676 ToG57Index spointingTrG676 ToG57Index spointingTrG676 ToG57Index spointingTrG676 ToG57Index spointingTrG676 ToG57Index spointingTrG676 ToG57Index spointingTrG677Tog to fist <td< td=""><td></td><td>Thumb up</td><td>T6G58</td><td>Zoomin</td><td>Full hand pinch opening to splay</td><td>T18G44</td></td<>		Thumb up	T6G58	Zoomin	Full hand pinch opening to splay	T18G44
Index pinching Index pinching TGG11 Victory sign TGG14 TGG14 Uright palm moving up TGG24 Upright palm moving up TGG24 Closing to fist and hold it long TGG55 Closing to fist and hold it long TGG7 Make a triangle with thumb and index finger with both hands TGG7 Make a triangle with all fingers TG67 Closing to fist TGG7 Splay closing to fill hand pinch TG635 Closing to fist TG67 Closing to fist TG67 Splay closing to full hand pinch TG635 Closing to fist TG67 Splay closing to full hand pinch TG645 Naviggt Upright palm moving dwn T19639 Index pinching TG661 Naviggt Index pinching TG661 Naviggt Index pinching TG661 Time up TG666 Time up TC10615 Index pinching TG611 Turing a knob clockwise T21614 Tumb up TG67 Time the ac	Activate	Clapping	T6G4	Zoom out	Palms moving away	T18G2
InternalVictory signT6G24Upright palm moving upT18G40Upright palm moving upT6G40Camera fingers sign Getting closeT19G47Closing to fist and hold it longT6G57Splay Closing to fill hand pinchT19G47Closing to fistT6G7Splay Closing to fill hand pinchT19G47Make a triangle with all fingersT7G57Splay Closing to fill hand pinchT19G47Closing to fist and hold it longT7G57Splay Closing to fill hand pinchT19G47Closing to fist and hold it longT7G55Upright palm moving downT19G41NavigatIndex-midle roof signT7G66NextRotated palm filcking rightT20G17NavigatIndex pointingT8G10T7G66Next all spirgingT21G12Upright nakex movingT8G10T0G161T110G41T21G22Index pointingT9G13T0G161T110G41T21G22Kent triggerT9G65Tumub upT9G58Tuming a knob clockviseT22G48Forchand slapping wideT10G15Side pinch moving upT22G52Long forchand slapping wideT10G161Side pinch moving downT22G52ConfineTicking rightT12G53Side pinch moving downT23G57ConfineTicking rightT12G58Side pinch moving downT23G57Confine fine fine krigg rightT110G17Tuming a knob clockviseT23G49Pinch moving upT22G56Side pinch moving downT23G57Confine fine krigg rightT110G21P	manu	Index pinching	T6G11		Pinch moving up	T18G38
Upright palm moving up T6640 Closing to fist and hold it long T6655 Hat four fingers (folded thumb) T6664 Closing to fist T667 Make a triangle with thumb and index finger with both hands T7657 Closing to fist T7667 Make a triangle with thumb and index finger with both hands T7657 Closing to fist T7667 Splay closing to fill hand pinch T7646 Closing to fist and hold it long T7657 Closing to fist and hold it long T7656 Index pointing T7666 Varight palm moving down T19649 Index pointing T8699 Upright ndex moving T9611 Index pointing T9611 Index trigger T9612 Pointing-index poking T9612 Pointing-index poking T9647 Closing to fist T19649 Index trigger T96658 Closing to fist T9677 Index trigger T96658 Closing to fist T19647 Index trigger	menu	Victory sign	T6G24		Upright palm moving up	T18G40
Closing to fist and hold it longT6655Flat four fingers (folded thumb)T6664Closing to fistT6674Make a triangle with all fingersT7657Make a triangle with all fingersT7657Closing to fistT6674Closing to fist and hold it longT7657Closing to fist and hold it longT7655Index-middle roof signT7665Index roingingT8669Upright index movingT8610NavigateIndex roiningIndex trappingT9611Index trappingT9612PrinchT10645Closing to fistT9677Index trappingT9613Thumb upT9658Closing to fistT9677Index trappingT10614Forehand slappingT10614Closing to fistT10621Index triggerT10614Closing to fistT10621Index triggerT10621Index triggerT10621Long forehand slappingT106164Rotated palm ficking leftT122650Side pinch moving downT226748Pinch moving downT226748Pinch moving downT22674Pinch moving downT22675Index triggerT10621Long backhand slappingT106164Rotated palm ficking leftT10621Long backhand slappingT106164Rotated palm ficking rightT126263Long backhand slappingT106164Rotated palm ficking rightT126263		Upright palm moving up	T6G40		Camera fingers sign Getting close	T19G47
Flat four fingers (folded thumb) T6G64 Closing to fist T6G7 Make a triangle with humb and index finger with both hands T7G57 Make a triangle with all fingers T7G57 Closing to fist T7G7 Splay closing to full hand pinch T7G57 Closing to fist T7G7 Splay closing to full hand pinch T7G457 Closing to fist T7G7 Splay closing to full hand pinch T7G457 Index middle roof sign T7G66 Index pointing T8G9 Index printing T9G11 Index trigger T9G12 Index trigger T9G12 Index trigger T9G13 Index trigger T9G13 Index trigger T9G65 Closing to fist T9G7 Index trigger T9G64 Coon first Forehand slapping Forehand slapping T10G14 Rotated palm ficking right T22G40 Turming a knob clockwise T22G40 Turning a knob counter-clockwise T22G40 Turning a knob counter-clockwise T22G40		Closing to fist and hold it long	T6G55		Closing the hook-shape pinch to closed pinch	T19G43
International part of the second se		Flat four fingers (folded thumb)	T6G64		Splay closing to full hand ninch	T19G45
Closing to first11007Make a triangle with thumb and index finger with both hands17057Make a triangle with all fingers170656Make a triangle with all fingers17067Closing to fist11001Splacy closing to fist and hold it long170656Index-middle roof sign170666NavigateIndex pointingIndex pointing18699Upright nadex moving179611Index pointing179611Index trapping179612Index trapping179613Thumb up179655Index trapping170616Closing to fist170676Index trapping179612Index trapping170616Closing to fist170626Index trapping170616Rotated palm ficking left1710621Index trapping110614Coo to first170616Rotated palm ficking left171022Index trapping110614Coo to first110624Long forehand slapping1110121Rotated palm ficking left110221Index might112626Long forehand slapping1110121Rotated palm ficking right112658Confirm112054Nodding the head112661NotNodding the head112661Noding the head112666Noding the head113660Yawina113665		Closing to fist	T6G7		Palms getting closer	T19G3
Nake a triangle with thinb at more miger with thinb at		Make a triangle with thumb and index finger with both hands	1007		Dinah maying daym	T10C20
Make a transfer with all ingers $1/1657$ FormSplay closing to fist 17677 Splay closing to fist 17677 Splay closing to fist and hold it long 17645 Index-middle roof sign 17665 NavigateIndex moving 17869 Upright index moving 17869 Vuright index moving 178610 Index trapping 179612 Index trapping 179612 Pointing-index paking 179612 Pointing-index paking 179613 Thamb up 179677 Index trigger 170674 <td></td> <td>Make a mangle with multipland index iniger with both narios</td> <td>17050</td> <td> </td> <td>Filch moving down</td> <td>119039</td>		Make a mangle with multipland index iniger with both narios	17050		Filch moving down	119039
Home Moment Closing to fistClosing to fist17/G7Backhand slapping120617Splay closing to full hand princh77/G45Rotated palm flicking right720622Closing to fist and hold it long77/G55NewtRotated palm flicking right720623Index-middle roof sign77/G56TransbForehand slapping721G14NavigatUpright index moving78G10TransbForehand slapping721G14Index trapping79G12Transb left moving left721G20Index trapping79G12Upright palm moving up722G48Thumb up79G58Turning a knob clockwise722G49Closing to fist79G7Turning a knob clockwise722G49Toefhand slapping710G14Upright palm moving up722G49Forehand slapping wide710G14Upright palm moving up722G49Got toftForehand slapping711G17Side pinch moving up722G49Rotated palm flicking right711G22Mown723G27Got toftThumb up711G17Side pinch moving up722G49Rotated palm flicking right711G22Mown723G27Rotated palm flicking right711G23Mown723G37Noding the head711G23Moment of down723G37Noding the head711G263Min moving down723G37Noding the head711G263Jinking the head713G59Noding the head713G59Side pinch moving down723G37Noding the head <td></td> <td>Make a triangle with all fingers</td> <td>17657</td> <td></td> <td>Upright palm moving down</td> <td>T19G41</td>		Make a triangle with all fingers	17657		Upright palm moving down	T19G41
Splay closing to full hand pinchT7445NextRotated palm ficking rightT20631Closing to fist and hold it longT7466Upright palm moving rightT20631Index-midle roof signT7466Forehand slappingT21614NavigateIndex pinchingT9611Tumb upT21632Index trajpingT9611Upright palm moving leftT21620Index trajpingT9612Upright palm moving leftT21620Pointing-index pokingT9613Upright palm moving leftT212620RumPointing-index pokingT9613Upright palm moving upT22640Rotated palm ficking rightT02614Upright palm moving upT22640Go to firstForehand slappingT10614Upright palm moving upT22640Rotated palm ficking rightT106215Side pinch moving upT22640Go to lastBackhand slappingT11617Downward palm moving upT22640Rotated palm ficking rightT11622Downward palm moving upT22640Go to lastTimo upT12658Side pinch moving upT22640Rotated palm ficking rightT11622Downward palm moving downT23637Rotated palm ficking rightT126258Pinch rotating counter-clockwiseT23640ConfirmTumb upT12658Side pinch moving downT23637Noding the headT112621Notang downT23637Notang the headT113659Side pinch moving downT23637Notang the headT113659Side p	Home	Closing to fist	T7G7		Backhand slapping	T20G17
Closing to fist and hold it longT7G55Upright palm moving rightT20G11Index.middle roof signT8G69Forehand slappingT21G14NavigateIndex movingT8G9Thumb left moving leftT21G20Index tappingT9G11Upright nakex moking upT22G26Index tappingT9G13Upright nakex noting upT22G26Thumb upT9G58Upright nakex noting upT22G26Cosing to fistT9G67Upright nake noting clockwiseT22G48Index triggerT9G65Forehand slappingT10G14Forehand slapping wideT10G16Side pinch moving upT22G30Go to firstCong forehand slappingT10G16Side pinch moving upT22G30Rotated palm ficking leftT10G21Downward palm moving downT22G30Go to lastBackhand slappingT11G19Side pinch moving upT22G30Rotated palm ficking rightT11G18Downward palm moving downT23G49Long backhand slappingT11G19Pinch noving downT23G30Rotated palm ficking rightT11G21Turning a knob courter-clockwiseT23G49Moding the headT12G58VolumePointap-index rotating courter-clockwiseT23G49YavinpT13G69Side pinch moving downT23G37WavinpT13G65Side pinch moving downT23G37Naking the headT112G5Side pinch moving downT23G37Naking the headT112G56Side pinch moving downT23G37Naking the head </td <td></td> <td>Splay closing to full hand pinch</td> <td>T7G45</td> <td rowspan="2">Next</td> <td>Rotated palm flicking right</td> <td>T20G22</td>		Splay closing to full hand pinch	T7G45	Next	Rotated palm flicking right	T20G22
Index-midle roof signT7666NavigatIndex pointingT7869NavigatIndex pointingT8610Index inpringT9611Index tappingT9612Index tappingT9612Thumb upT9658Closing to fistT967Index tappingT967Index tappingT9675Closing to fistT967Index tappingT9675Closing to fistT9675Index triggerT0614Forehand slappingT10614Rotated palm ficking leftT22640Index tapping wideT10615Ing forehand slappingT10616Rotated palm ficking leftT10252Go to firstForehand slappingRotated palm ficking leftT10626Rotated palm ficking leftT10621Backhand slapping wideT11617Backhand slapping wideT11617Backhand slapping wideT11617Rotated palm ficking rightT11622Confirm (Yes)Tumb upT12658Noding the headT12651Noding the headT12656Noding the headT12656Shaking the headT13659Shaking the headT13659Shaking the headT13650Shaking the headT13665		Closing to fist and hold it long	T7G55		Upright palm moving right	T20G31
Navigate Index pointingIndex pointingTSG9 Upright index movingTSG10Turce Rotated pain file/sing leftT21G20 Rotated pain file/sing fileGo to first Go to first Go to first Go to first Go to first Go to first Rotated pain file/sing indicT10G11 Rotated pain file/sing indicT10G11 T11G13Journal of Side printer-clockwiseT22G40 Pointing-index rotating clockwiseT22G40 T22G40Go to first Go to first (Yes)Forehand slapping Rotated pain file/sing rightT11G17 T11G17Downward pain moving upT22G40 T22G40Rotated pain file/sing indic (Yes)Forehand slappingT11G17 T11G17Turning a knob counter-clockwiseT23G40 T23G41Confir (Yes)Tumb upT12G53 Noding the headT11G22 T11G44Point noving downT23G41 T23G41Confir (Yes)Tumb downT13G59Side pinch moving downT23G41 T23G41Noding the headT11G59 Side pinch moving downT23G41 T23G41Noding the headT113G59Side pinch moving downT23G41 T23G41Notate downT13G59Side pinch mov		Index-middle roof sign	T7G66		Forehand slapping	T21G14
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Ge to first Long forehand slapping wide T10G15 Hand behaid ear (sign of "listening") T22G50 Rotated pahm ficking left T10G21 Side pinch moving down T22G70 Backhand slapping wide T11G17 Downward pahm moving down T23G27 Backhand slapping wide T11G17 Downward pahm moving down T23G27 Backhand slapping T11G17 Downward pahm moving down T23G27 Rotated pahm ficking right T11G22 Vome Pinch rotating counter-clockwise T23G30 Confirm (Yes) Thumb up T12G58 Upright palm moving down T23G51 Noding the head T113G59 Side pinch moving down T23G52 Shaking the head T13G59 Side pinch moving down T23G72		Forehand slapping	T10G14		Upright palm moving up	T22G40
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