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# **Natural Interactive Systems Laboratory**

## **MUMIN Coding Schemes for NWB**

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# 1 General view of MUMIN coding

The table below shows how the aggregated MUMIN coding schemes in use with the NWB, including a brief example. The four new coding schemes involved are presented below.

tStart	tEnd	speakerId	speechTrans	commFunctions General	cfSpeech	cfFacial	cfGesture
		1	I like this hat. It's dramatic.				
		2		gfAccept			
		2				headNod	
		1	I look like				
		1		mtHoldTurn			
		2	You look sensational.				
		2		mtTakeTurn			
		2				gazeMutual	
		2					symbolicSHup

## 2 General communicative functions coding scheme

Communicative functions general: commFunctionsGeneral

Level 1	Level 2	Level 3
communicativeFunctions	giveFeedback	gfContinue
		gfAccept
		gfRefuse
		gfOther
	elicitFeedback	efRequireConfirm
		efCheckAttention
		efOther
	manageTurn	mtTakeTurn
		mtGiveTurn
		mtHoldTurn
		mtOther

### **3 Speech communicative functions coding scheme**

Communicative functions speech: cfSpeech

<b>Level 1</b>	<b>Level 2</b>	<b>Level 3</b>
cfSpeech	sGiveFeedback	sGfContinue
		sGfAccept
		sGfRefuse
		sGfOther
	sElicitFeedback	sEfRequireConfirm
		sEfCheckAttention
		sEfOther
	sManageTurn	sMtTakeTurn
		sMtGiveTurn
		sMtHoldTurn
		sMtOther

## 4 Facial communicative functions coding scheme

Communicative functions facial: cfFacial

Level 1	Level 2	Level 3	Level 4
cfFacial	brows	browsFrown	
		browsRaise	
		browsOther	
	eyes	eyesOpen	
		eyesClosed	
		eyesSemiclosed	
		eyesOther	
	gaze	gazeMutual	
		gazeUp	
		gazeDown	
		gazeSideways	
		gazeUnfocused	
		gazeOther	
	mouth	mouthOpenness	mouthOpen
			mouthClosed
			mouthOpenOther
		mouthCorners	mouthUp
			mouthDown
			mouthCornersOther
		mouthLips	mouthProtruded
			mouthNonprotruded
			mouthLipsOther
	head	headNod	
		headJerk	
		headShake	
		headWaggle	
		headSideturn	
		headOther	

## 5 Gesture communicative functions coding scheme

Communicative functions (hand) gesture: cfGesture

Level 1	Level 2	Level 3	Level 4
cfGesture	type	batonic	batonicSHup
		deictic	batonicSHdown
		iconic	batonicSHsideways
		symbolic	batonicSHcomplex
		other	batonicBHup
	handedness	singleHand (SH)	batonicBHdown
		bothHands (BH)	batonicBHsideways
	trajectory	up	batonicBHcomplex
		down	deicticSHup
		sideways	deicticSHdown
		complex	deicticSHsideways
			deicticSHcomplex
			deicticBHup
			deicticBHdown
			deicticBHsideways
			deicticBHcomplex
			iconicSHup
			iconicSHdown
			iconicSHsideways
			iconicSHcomplex
			iconicBHup
			iconicBHdown
			iconicBHsideways
			iconicBHcomplex
			symbolicSHup
			symbolicSHdown
			symbolicSHsideways
			symbolicSHcomplex
			symbolicBHup
			symbolicBHdown
			symbolicBHsideways
			symbolicBHcomplex
			other