

Mahidol University • College of Music

Analytic Music Theory

Monday, 18 January, 2553 – Set Theory Terminology

Octave Equivalence: All notes of the same name, regardless of register, are treated as equivalent.

Enharmonic Equivalence: Notes of a different name with the same frequency in the equal-tempered system.

Pitch-Class: A group of pitches with the same name or enharmonic equivalence.

Integer Notation: The ascription of numbers (0–12) to the twelve pitch classes, such that C=0, C#/Db=1, etc.

Pitch Interval: The distance between two pitches, measured in semitones (half steps). Ordered ips are those which include a plus sign (+) or minus sign (-) to indicate the direction of the interval spanned. Where the absolute distance is included without concern for direction, the up is understood to be unordered and is not preceded by a + or -.

Ordered Pitch-Class Interval: The intervallic distance between two pitch-classes, measured in semitones (half steps), accounting for the direction of the interval. This number will never be greater than 11.

Unordered Pitch-Class Intervals: The intervallic distance between two pitch-classes, measured in semitones (half steps), regardless of direction. This number will never be greater than 6,

Interval-Class: Another term for Unordered Pitch-Class Interval.

Mod 12: The arithmetic system of addition and subtraction which assumes octave equivalence. That is, any number larger than 11 or smaller than 0 is equivalent to some integer from 0 to 11, inclusive. Therefore, by adding or subtracting 12 (or multiples of 12) to numbers outside of the inclusive set from 0 to 11, a theorist can identify the pitch-class or ordered pitch-class interval reduced to its essential or equivalent structure. For example, when confronted with an absolute interval of 15 semitones, subtract 12 from this interval to obtain the interval class. $15-12=3$. For a simple, graphic representation of this concept, look at an analog clock face and imagine the time 12 hours from now. At 3:00p.m., the time at twelve hours distance may be considered not 15:00 but, rather, 3:00 a.m.

Interval-Class Content: A summary of all of the intervals contained within a sonority. The interval-class content is represented in an interval vector.